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THE PACIFIC RURAL PRESS

AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 1.

SAN FRANCISCO, SATURDAY, JANUARY 5, 1895.

TWENTY-FOURTH YEAR.
Office, 220 Market Street.

Pipe Lines for Irrigation Water.

California has made amazing progress during the last decade in economical water carriage for long distances. In our last volume we gave views of pipe lines and remarked that the open ditch, with its alarming loss by seepage and evaporation, is a back number now in our great irrigation schemes and either pipe lines, which lose nothing, or cemented ditches, which prevent seepage, are multiplying in all parts of the State where irrigation is resorted to. Naturally, the greatest progress has been made in this direction in southern California, and there is in the Santa Ana canyon the largest wooden pipe line in the world, carrying water under 160 feet of pressure.

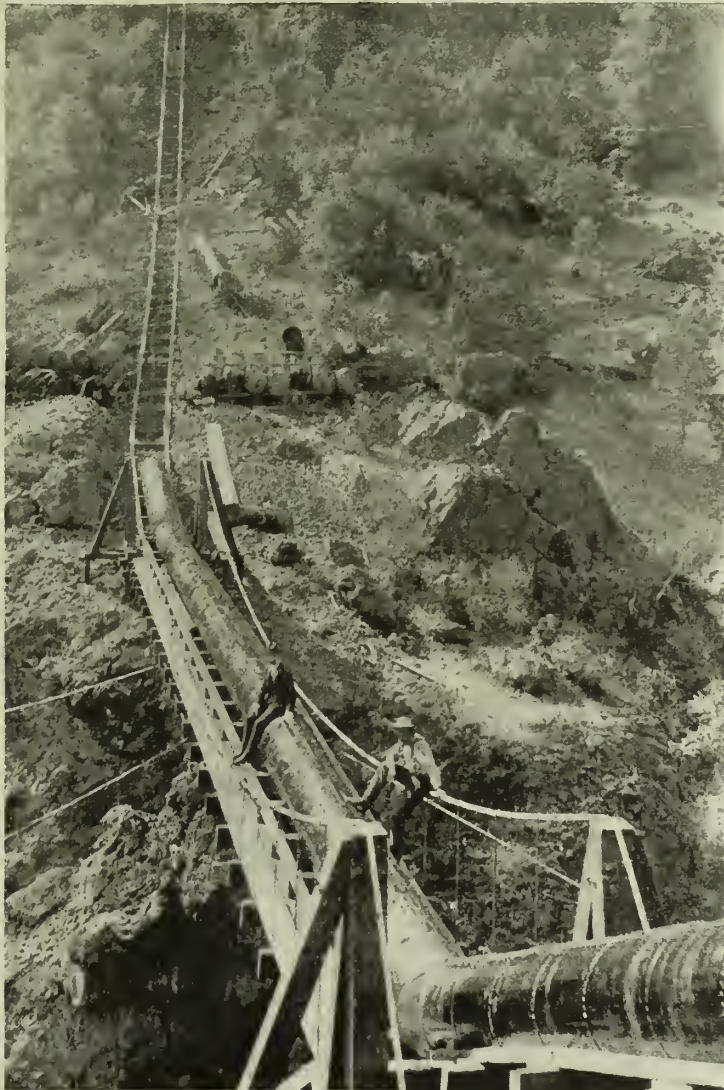
The pipe line has, of course, other advantages than prevention of waste. It makes the engineer independent of grades and enables him to surmount obstacles which otherwise would require expensive tunneling. He can surely laugh at obstacles who can make water run up hill.

At present pipe lines are replacing open ditches in the northern part of the State not alone for mining, where this way of securing forceful heads has long been employed, but for irrigation enterprises, which, by bridging canyons and mounting ridges, are rendered possible where the old-style aqueducts and tunnels would prohibit them.

The engravings on this page give two views on the line of the Brown's Valley Irrigation District in Yuba county. The sheet iron and steel pipe used in this construction was made by Schaw, Ingram, Batchelor & Co. of Sacramento. In one picture the pipe is shown in process of construction over a ridge after having spanned the gulch in the foreground. The other engraving shows the passage of the pipe over a neat suspension bridge 125 feet long.

These views are but illustrative of present progress in this line of irrigation engineering. In the near future no doubt the matter will go much farther. Our interior cities and towns, dependent now upon insufficient supplies of poor water from local sources, will soon have unlimited supplies of pure cold mountain water piped to them, and the power of such water will, with the aid of electricity, cause light to shine and manufacturing to be undertaken, which is now almost unthought of. Surely we are just at the beginning of our industrial development, and the future will bring us blessings from our lofty, snow-capped, mountain boundary which will prove a great factor in the attainment of the California of the future.

An Eastern exchange says that the fact that the names of the buyers of the well-bred horses sold dur-



PIPE LINE OF THE BROWN'S VALLEY IRRIGATION DISTRICT.



SAME PIPE LINE CROSSING A SUSPENSION BRIDGE.

Irrigation Extending.

The sight of the pipes of an irrigation district in the upper part of the State reminds us that the state of mind on the subject of irrigation, even in regions of considerable rainfall is changing. It is not long since people in well-watered regions looked upon all propositions to use water in them as a sort of insult to Providence. In northern California opposition to irrigation has been conducted rather in the spirit of contrariness, lest someone might think that it might be taken as an admission that irrigation is necessary and the great glory of the north would be gone. Recent courses of events show that we are drifting away from these old, ill-taken positions and are coming to regard irrigation as one of the most important means of the husbandman to be used, as other means should be, intelligently and to secure ends which are demonstrated to be best attained that way. Viewed in this way, it is clear that neither irrigation nor non-irrigation are in themselves principles, but are merely methods to be employed when conditions demand the one or the other. It is unquestionably true that in the upper half of the State many orchards would be benefited by irrigation, even though the annual rainfall be heavy. This was conceded long ago in the foothills, where conditions favored rapid loss of water by seepage and evaporation, it is now being made clear that some valley situations need water to enable old bearing trees to perfect full crops of large fruit and make good fruit buds for the next crop. When such trees lose their leaves too early in the fall, they are not able to do the full year's work. They are short of moisture to complete it. There are places where no

amount of careful summer cultivation will retain moisture enough for the full cycle of the tree. It is such trees chiefly which put on the undesirable late fall growth after the first rains. They have been forced into dormancy by drouth; they are stimulated to new growth by the rains. If they had held growth later, this undesirable starting of buds, which should rest until spring, would be avoided.

We have, of course, much still to learn about irrigation. The winter use of water which is now flowing idly to the ocean would ensure good crops on many fields which may yet be parched in April, although the present outlook for a wet season is so good. These matters are not new. They have been urged time and again, and it is encouraging to see that we are

ing the recent New York sales were largely new to horsemen is evidence that the interest in light-harness horses is still spreading. As long as new men are continually entering the ranks of ownership there is no danger of a collapse in the breeding interest.

approaching the irrigation question with less prejudice and in a better state of mind to profit by the lessons which are now so freely taught by observation. Irrigation is undoubtedly the safeguard of many of our orchards.

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ALFRED HOLMAN, Editor.
E. J. WICKSON, Special Contributor.

San Francisco, January 5, 1895.

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The Week.

Horticultural Society.

The storm and the holidays reduced the attendance at the meeting of the State Horticultural Society on Friday last, but the proceedings were interesting. Mr. Lelong presided. Mr. Otto Muser of San Francisco and Gen. N. P. Chipman of Red Bluff were elected regular members. Naturally the chief subject was the coming meeting of the American Pomological Society in Sacramento on the 15th, 16th and 17th. Mr. Rowley, of the committee on preparations, reported that the programme was nearly completed and that everything indicated busy and interesting sessions. The Sacramento citizens' committee is advancing its local preparations satisfactorily, and proposes not only to make the visitors welcome, but to show them much of the surrounding country if the weather should favor outings.

Cooked Dried Fruit.

The Society's committee suggested the advisability of having California dried fruits of all kinds properly cooked served to the delegates continuously during the sessions. This will not only give the visitors a chance to admire the exhibits, but to determine by tasting how good our dried fruit is when cooked in a proper manner in contrast with the poor cooking which is too often given it. The Society strongly approved the suggestion of the committee and upon motion appointed a committee consisting of Prof. C. H. Allen of San Jose, H. P. Stabler of Yuba City and Howard Overacker Jr. of Centerville to take full charge of the matter. It is believed that fruit growers will donate fruit for this practical demonstration of its quality; and if all will take an interest in the matter, there should be plenty of fruit to keep the visitors busy with their spoons. We trust all who will donate fruit will notify at once any member of the committee above named, and instructions will be sent for shipping. Let each one do his share generously in this effort.

What Fruit to Plant.

The attendance of members was too small to give wide discussion to this subject. Mr. I. H. Thomas of Visalia thought present indications were in favor of a larger acreage of nectarines in regions well suited for drying. The nectarine is now being called for, while a few years ago Eastern people did not know them. Dried nectarines sell higher than dried peaches at present. Mr. Rixford said the planting of prunes in Tulare county was proceeding strongly. He told of 700 acres being planted by two parties to prunes, peaches and apricots. Mr. Overacker said the low prices of fruit was leading orchardists to discriminate closely between the trees in old or-

chards, and many unprofitable old trees were coming out. They had not decided yet whether to increase the acreage or not.

Legislation for Dairymen.

A call has been issued for a meeting to be held in the city hall at Petaluma on the 5th inst., at which all interested in the dairy industry are invited to be present. The object is to get wheels in motion which will secure at the coming session of the Legislature such laws as will promote and protect the dairy interests. The Petaluma Courier, from which we gain this information, says: It is more than likely that at this meeting the matter of the appointment of a State veterinary surgeon will be discussed and urged. This one object alone is or should be a sufficient incentive to call out the entire list of dairymen, as it is of vital importance. The appointment of a State veterinary surgeon would be accompanied by the enactment of laws authorizing the appointment of county veterinary surgeons who should co-operate with the State surgeon; also of laws defining the duties of these surgeons and the limits of investigation for the protection of the health of the vast herds of cattle of the State. A careful study of experiments for the benefit of the dairymen would be conducted under the supervision of the surgeon, if appointed, and thus the thousands now engaged in dairying would be better prepared to avoid errors and could adopt new methods after their value had been proven by experiment. Dr. Thomas Macley of this city, who was one of the originators of the State Veterinary Association which recently convened in San Francisco, is deeply interested in the formation of such a bureau for the benefit of the stock industry in general. He goes on the principle that an ounce of prevention is worth a pound of cure, and shows that the cost of the bureau to the State will be saved to the taxpayers many times over in the matter of prevention of disease alone, such as glanders, tuberculosis, foot and mouth disease, and so on.

Orange Prices.

Already the regular annual fight is on in regard to prices for oranges. The Redlands Citigraph of Dec.

29th contains the following:

We notice a severe attack made by Riverside shippers on the Redlands Exchanges for cutting prices. Redlands shipped but a few cars and received \$2.50 f. o. b. for them. About the 1st of December the Riverside Exchange sent out a circular in which occurred this sentence:

We can furnish only a limited number of carloads of this selected fruit between now and Jan. 15th at \$2.50 per box, f. o. b., with a guarantee to protect you against any lower prices that we might quote in the meantime on the same grade of fruit.

Do you see the joker in this? A "guarantee" of protection means a commission, and nothing else. The proposition of the Riverside Exchange is a direct bid for Eastern firms to make a desperate effort to break down prices. To break prices in January is to get a rebate on all purchased previously. It is a sly—devilish sly—scheme, and a good one for dealers East—who may be in collusion with shippers here—but it is a most disastrous one for the grower.

The only method that is fair, reasonable or just is to have a square f. o. b. price here—not a price with a string to it like the one made by the Riverside Exchange. F. o. b. must mean what it says, or else we might as well go back to the commission days and let the conscienceless commission merchant handle our product as he pleases and call on the grower for "more mud" at his sweet will and pleasure.

With reference to the same transaction, the Press, which speaks for the Riverside Exchange, says:

Referring to lower prices that are being quoted on oranges from other districts, we have investigated the matter and find that the Redlands association sold a carload of fruit to a Portland firm at \$2.50 per box f. o. b. After the order had been accepted by the Portland firm, a party by the name of "Gregory" quoted a car at \$2.10 per box. The association order was cancelled and the \$2.10 offer accepted. Allen Bros. of Los Angeles are quoting Highland Navel at \$2 f. o. b. We intend as far as possible to follow up these lower quotations this season and publish the names of all parties quoting less than regular Exchange prices.

Freeze in Florida.

Our Florida friends seem to have been hit very hard by Jack Frost this time. If telegraphic dispatches are correct the orange growers have met a Waterloo. The following is the latest dispatch up to our going to press:

JACKSONVILLE (Fla.), December 31.—The first reports of Florida's loss in citrus fruits from the extraordinary cold snap that visited this State three days ago were not exaggerated.

The best estimates of the loss in oranges is \$5,000,000, without counting young orange trees killed and the general destruction of pineapples, limes, guavas and bananas and winter vegetables, which must make heavy apparent losses.

The most careful computation is that 3,000,000 boxes were on the trees. President Fairbanks of the Florida Fruit Exchange says that practically all are destroyed. Some south of Punta Gorda may be shipped, but this is inconsiderable. He regards the season as ended. An average box of oranges would bring in the market \$1.75, so that the loss of 3,000,000 to the growers, the labor engaged in the boxing and shipping, transportation and commission, would amount to \$5,250,000.

Reports from the interior of the State show that the cold weather has been general, and has extended from one side of the peninsula to the other. The lowest temperature at Tampa was 18°, and the same was reported at Titusville. At Cedar Key it was said to be as low as 16°.

This is a terrific blow at the semi-tropical interests of Florida. It is not definitely known what degree of frost destroys an orange, but 24° is the figure commonly mentioned in this State. If the Florida figures are correct, it will no doubt go very hard with the trees as well as the fruit.

The effect upon the orange market by the cutting

off of the Florida supply will be a notable advance of the California fruit. It is telegraphed from San Bernardino that buyers of oranges have been active in that vicinity picking up choice lots at advantageous prices. News of the disaster to the crop in Florida has resulted in an advance from fifty cents, heretofore offered in the orchard, to \$1. The growers are much encouraged, and are now holding No. 1 Seedlings and Navels at \$1.50 to \$2.50 per box. There are two dangers in the situation to Californians—one is the danger of holding the fruit too high until Eastern consumers conclude to go without and another is that the rush for the high prices offered by speculators may throw people out of the Fruit Exchanges for this year. The latter danger is the more serious, perhaps. If the growers stay by the Exchanges they will be most likely to get all there is in the traffic not only this year, but in coming years. The Exchanges can deal with the present situation better than individuals can.

Good Cows.

We have often commented upon the necessity of getting better cows before dairy production will

give the profit it should to the dairymen. We hope all our dairy readers will study carefully the position of E. W. Steele on this question as given at length on another page of this week's RURAL. It will be seen that Mr. Steele's standard is pretty high, but who can say that dairymen should not push along toward it as far as practicable. Read what Mr. Steele says a cow should do, and then see what California cows do on the average, as estimated by W. H. Russell of the Dairymen's Union of this city. He says:

California has 333,310 milch cows, and each will average 3750 pounds of milk or 150 pounds of butter per year. The produce of 106,660 cows is consumed as milk; that of 19,200 into cheese, and that of 207,444 is made into butter.

The value of the dairy products may be more clearly set forth by the following figures, which represent a yearly average:

50,000,000 gallons of milk, at 12 cents.....	\$6,000,000
31,116,600 pounds of butter, at 19 cents.....	5,912,154
9,000,000 pounds of cheese, at 9 cents.....	810,000
Calves, \$2 per cow, average.....	655,620
Skim milk, used as hog feed.....	1,037,220

Total, yearly average..... \$14,425,994

These figures make the dairy of great commercial importance to California, as indeed it is. But suppose we could get cows which would come nearer to what Mr. Steele claims they should produce. Let our dairy readers figure on it a little, and then go to work to improve their stock, as can now be cheaply done at the prices for which the best dairy breeds can be obtained.

Chickens at the Pavilion.

The big poultry show under the auspices of the Poultry Association is to open on Thursday of this week, and on Wednesday, as we write, preparations are well in hand. Fifteen hundred chickens have been entered, among them individuals which it is claimed are equal to any chickens under the sun. In connection with the show, there will be a fine display of incubating appliances, etc., etc.

Gleanings.

A CUPERTINO letter to the Mountain View Messenger says: Many of the orchardists of this community are hiding their dried fruits for better prices, not being willing to dispose of their stock at the present quotations.

RED BLUFF People's Cause: Tears, idle tears, have been wasted over the fact that wheat is being fed to stock, and apostles of calamity the country over have been throwing up their hands and crying out against a condition of things which results in feeding breadstuffs to swine. Well, what would you feed the poor swine then? Barley? Barley bread is the staff of Europe. Would you feed them oats? Oatmeal is what makes such fine men in Scotland, as well as fine horses in England. Would you give corn to the hogs? The consumption of cornmeal by the people of the world is growing rapidly, and cornbread and hominy has been the staff of life in the South for generations. The thing to feed hogs in order to make pork is the stuff that will make the best pork for the least money, and just now that stuff appears to be wheat; and it is not only right to feed it to hogs, but it would be all wrong not to feed it.

TALKING with a reporter at Los Angeles recently, Mr. Edward A. Cudahy, of the Cudahy Packing Company, said: "The raising of hogs in southern California has proven very satisfactory to the firm so far. But the product has not come up to the capacity of the packing house in this city. We have here a capacity for 60,000 hogs, and the yearly output of hogs during the past year was only a little over 30,000. This is, however, very satisfactory, considering the fact that it was only a year or so ago that there was any attempt at raising of the animals in an extensive way. We expect the product to be much larger next year and we are ready to increase our plant the moment the product calls for it. One of the pleasing things about the hogs of southern California is their superior quality. Nearly all the ordinary grades are equal in quality to the Eastern product, and some of them are vastly superior to them. The result of raising hogs has been as satisfactory to those raising them as to ourselves, as they have gotten good prices for all that were offered for sale. We anticipate a great increase in the production of hogs in a year or so we would not be surprised if the output exceeded 100,000 a year. The farmers are all taking an increased interest in the matter, and we are in receipt of letters every day from ranchers who are just starting in the industry. Southern California is especially adapted for the rearing of hogs and the production of a very superior quality of the animal."

From an Independent Standpoint.

It is reported from Washington that the Morgan Nicaragua Canal bill is practically certain to pass the Senate within a few days, but that it is "bound to be cut to pieces in the House, where more popular ideas prevail respecting the policy of the Government in the matter of this great project." This news will be gratifying to all who think with the RURAL that the Morgan bill is faulty in proposing a sort of partnership between the Government and certain private persons now owners of stock in the "Maritime Canal Company of Nicaragua." The Morgan bill provides for continuing this company, with the United States Government as the chief stockholder. The capital stock is fixed at \$100,000,000. Of this amount \$70,000,000 is to go to the United States as paid-up stock. To the government of Nicaragua, \$6,000,000 of the stock must be given for the concessions, and \$1,500,000 to the government of Costa Rica. To extinguish all issues of stock or bonds heretofore made by the Maritime Canal Company, new stock is to be issued to the company to an amount not exceeding \$7,000,000; and as the new stock shall be issued, the old stock of the company is to be cancelled. The seventy millions of stock to the United States is to be issued in consideration for its guaranty of the bonds of the company. Ten of the fifteen directors of the company are to be appointed by the United States, through nomination by the President and confirmation by the Senate.

By this arrangement the Government is to put up the bulk of the money and to be the chief owner, but is after all only to be a partner in the enterprise. How this sort of thing will work in practice does not require much wisdom to foresee. The persons actively and personally interested will set up a lobby at Washington; they will look after the appointment of the Government directors and will see to it that the places are filled by tools of their own. They will thus capture the management of the canal—secure to themselves the contracts for its construction and the places of profit in its service; and when it is completed they will fix the policy and regulate the methods of its operation.

Again, the proposed partnership is objectionable on the ground that it would bind the canal company to a policy of money-making, which is contrary to the public purposes chiefly in view in its construction. The motive, as understood by the people, is not to make of the canal a money-earning device, but an aid and promotor of American commerce. This would involve charges adjusted to the bare cost of operation and maintenance, whereas the interests of a private company—even of a company in part private—would lead inevitably to the application of the familiar principle—all the traffic will bear. It has been suggested that a policy of discrimination in charges between American and other ships—say one dollar per ton for our own vessels and two or three dollars for those of other nations—would be entirely legitimate and would do for American shipping interests what our tariff and navigation laws have utterly failed to accomplish. But such discrimination would, of course, only be possible under a policy looking to national advantage and under national ownership.

The persistence with which the plan of a partnership between the Government and private parties is brought forward and urged in connection with the canal project reflects the determination of the transportation interests of the country to protect themselves against the competition of the canal. Formerly they were openly and directly in opposition to the canal; now they see that it is inevitable and are hoping to limit its effects as they threaten present transportation interests by one hampering circumstance or another. They know—better than anybody else—that a private interest in the canal will enable them to control its administration, to regulate its policy and to prevent it from becoming in the largest sense a great public benefit. Again, they know that if the principle of absolute Government ownership and control be adopted in the matter of the Nicaragua canal, it will be but an easy step to apply it to the railroad system of the country. In putting stumbling blocks in the way of the canal

project, therefore, they are fighting the doctrine of Government administration of transportation in general.

It is notable that every point raised in hindrance of the plan for Government ownership of the canal is a mere technicality—a lawyer's objection. We were told two or three years ago that Government ownership was impossible owing to an old treaty between this country and England—as if treaties were things so sacred that they could not be altered or abrogated. Then we were told that there was no way in which the Government could become the owner of the canal, but that it might own stock in a company which owned the canal—as if the United States could or would underhand, and, by a subterfuge, do what was not proper and right for it to do openly and above board. Again it was declared that the Government had no constitutional authority to execute such a work in another country. Respecting this last quibble, Senator Morgan, speaking in the Senate, recently said:

I am a Democrat of so strict a sect as to all that relates to the powers that Congress may exert over the States or against the people that I sometimes feel that I may be dropped from the Democratic procession as it moves in an aggressive course against our reserved rights. But I have always supposed that this vital doctrine of the Democratic creed was intended for the protection of the rights of the States and their citizens within the Union, and were not limitations upon the power of the United States to protect and defend the people and to promote their general welfare in our dealings and relations with foreign peoples and Governments. As to these matters, I repeat I would very much regret to be compelled to admit that the United States does not possess powers equal to those of any nation in the world.

The principle herein expressed—that our Government has all the authority and powers of any other Government, and that there are no limitations upon its power when the welfare of the people is in question—is essentially sound; and of its own inherent weight it overcomes all the trifling and frivolous objections constantly urged against the canal project.

It is profoundly to be hoped that the House will, as intimated in the news from Washington, "cut the Morgan bill to pieces" and in its stead adopt a straight measure of Government ownership, involving administration of the canal upon considerations of national advantage and wholly free from private and sinister influences. No other policy is in keeping with the dignity of the Government or compatible with the interests of the undertaking. And none other will be satisfactory to the people of the country. There is, we believe, good reason to hope for such an outcome during the next few weeks. The Senate could not refuse to pass such a measure if presented by the House. The President seems to be under influences hostile to the canal, but it is not thinkable that he could be guilty of such manifest and supreme political folly as to stand between the will of the people and of Congress and this great work of national advantage.

For the past few days the gossips have had a choice subject in the will of the late James G. Fair—whose death occurred on Friday of last week. Mr. Fair left property whose value is variously estimated at from twenty to forty million of dollars. His natural heirs are three—a married daughter living in New York, a younger daughter also living in New York, and a son in San Francisco who has discredited himself and forfeited his father's respect by dissipated courses ending in a scandalous marriage. The will distributes somewhat less than a million dollars among collateral relatives, charities and personal employes, and gives the bulk of the estate in trust to a commission, subject to its own discretion in the management, to be kept intact during the lifetime of his children. To each of these one-third of the annual income of the estate is to be paid; if the son dies first his share goes to the daughters; if either of the daughters dies, her share goes to the other daughter, or her descendants. At the death of all three of his children the estate is to be divided as follows: One-fourth to the descendants of each of the daughters, one-half to the descendants of his brothers and sisters. The descendants of the son are to have no share in the distribution.

This strikes the RURAL as a good disposition of a great estate. All the obligations of the dead capitalist are abundantly answered; his children are royally provided for; his discredited son is properly rebuked;

the fortune is kept in California, where it rightfully belongs, and in the end it is to be widely distributed. Incidentally, it puts it out of the power of any fortune-hunting vagabond of a prince—by marriage with one of the heirs—to bodily transport this fortune or any great part of it to Europe. The RURAL does not much admire the Bonanza type of man; money acquired by working the stock market it does not consider very clean; but it does admire the spirit which, in the disposition of great wealth, recognizes obligations to the city and State in which it was acquired. This, Mr. Fair has done.

A Farmer's Views.

Criticism Respecting the Detail of State Expenditures.

SACRAMENTO, Jan. 1st, 1895.

TO THE EDITOR:—It cannot too often be said that the honest and capable management of the public business of California is a matter above all party bounds. During the coming session of the Legislature it will be the duty of the press to print and comment upon the work, good or evil, of each and every legislator. In due season it will be the duty of the people to punish, regardless of party, those who fail to stand up like men in the battle for the reorganization of our public affairs. By reorganization I mean system, economy and logical business arrangements in every department of State. I mean the saving of 25 per cent in yearly expenditures which our friends the Populists have talked about. I also mean, most decidedly, that it is possible to so reconstruct certain departments of State business as to save large sums of money and still produce better results than now. Good government comes slowly and never of itself. The voters and taxpayers must know what they want, and must insist on obtaining it. Sometimes a man who is not a taxpayer thinks that it makes no difference to him whether the expenses of the State and counties are too great. But it really concerns every man, woman and child in California if money is wasted in doing the public business. Each little community has less money in such a case, and can therefore pay out less, employ fewer laborers, give its children poorer educations, and go without home comforts.

Take that much-abused item of "supplies." In State and county affairs enormous waste often occurs here. Sometimes this is from no one's fault in particular; it is chiefly from lack of system and supervision. The "auditing" of bills that we hear so much of is, as a rule, only clerical. But why is there not a board upon whom all departments and individuals must make requisitions, naming quantities and prices of the desired supplies? The time to stop waste is before supplies are bought. Auditing bills usually means merely seeing that the vouchers and sub-vouchers are correct. An auditor has little time to see whether a department or commission uses too much or too high-priced supplies; when the bill comes in, the mischief is done. Let the power to order supplies of every sort be taken away from the persons interested. The State ought to buy all its supplies at a very great reduction. A good purchasing agent, under bonds, could save his salary ten times over.

Bookkeeping is important, and proper publication is just as necessary. The brief half-page reports in which large commissions give their balance sheets of expenditures of thirty or fifty thousand dollars, afford every opportunity for juggling with the returns and deceiving the public. Think of a line-long item in such a report (Mining Bureau) which reads: "Traveling Expenses.....\$10,755.39." How shall an honest taxpayer be able to trace up the hidden items of expenditure in his own town, and see if they are correct? It is not intended that he should do so. This one thing is of fundamental importance—that every item, and every cent, of public expenditure shall be printed in accessible form in the places in which they belong, even if somebody's speeches are left out of the reports. The reports of the State Commissions are all deficient in this respect. Without itemized financial statements, it becomes necessary for investigators to go to Sacramento and examine, at great expense, the records there. Such examinations invariably show that purchases of furniture, stationery and other supplies are largely without supervision, and that the State pays all kinds of prices for the same goods. In one instance, \$6.50 a ream was paid for type-writer paper, though business men are satisfied to use paper that costs from 65 cents to \$1.25 per ream. In another case, pen-holders were purchased at fifty cents apiece, when most of us buy the kind that cost twenty cents a dozen. We use cheap goods, and make them last as long as possible, because it is our own money that buys them. Now, in State purchases, the same law can be applied, and if all reports properly itemize expenditures, the taxpayers will soon force a reform in this direction. Items such as these may seem small, but they amount to hundreds of thousands of dollars in the aggregate. We are in desperate need of a skilled financial pruner who knows

how to trim out the small items as well as the large ones.

Two constitutional amendments should be submitted to the people of California: (1) An amendment abolishing the Railroad Commission. (2) An amendment drawn up by those who oppose the present State system of printing text-books, and proposing the abolishing of that system. This would bring the question fairly before the people of California, and settle it for a long time to come. There is something to be said on each side; let a full and free discussion take place. The best elements of the referendum idea are contained in the submission to the voters of important propositions such as these.

The RURAL PRESS has printed from time to time long articles on the expenses of running our State government, the State pay-roll and other topics. Let us now take up some of these items more in detail, so that the people will know how simple the matter of reform really is. When a taxpayer tells an official that expenses can and must be reduced, the answer sometimes is: "You will cripple our institutions;" or perhaps one is told that "The State can afford to pay better salaries than private employers do." Both these arguments are false. By a more systematic arrangement, and by getting rid of those departments or positions which are worth less than they cost, the State can obtain better service than now, for much less money. Nor should the State pay higher salaries than private employers should pay. State service lasts, as a rule, four years. Does a man who advertises for a clerk agree to keep him four years? Complete reform will never come until every employe of the State expects to give as much work for his salary as he would to a private employer. Practically, this means civil service reform in respect to all subordinate positions, and men and women will hold their places for years undisturbed. Is there really any reason why the State text-book clerk at Sacramento, whose duties are purely clerical and who simply distributes text-books to the school districts, should lose his position because a new Superintendent of Public Instruction is appointed? Is it not still more absurd to discharge gardeners, janitors, porters, elevator boys, after every election?

Flush times left us long ago. Great business houses, and greater corporations, have faced the issue of new and more difficult economic conditions, and have taken in sail. Private employers now pay lower wages, and expect more service. Figure-heads have disappeared: sinecures no longer exist in business circles. But the inevitable readjustments which every private individual has gracefully accepted have not yet troubled our State and county officials. The State is behind the times; we pay too much for services. Let us consider a few simple readjustments.

In a number of cases at the capitol and elsewhere, common laborers on the grounds and porters in the buildings, etc., are paid \$1080 per annum, or \$90 a month. Twelve such laborers are employed by the Capitol Commission. Now, most excellent foremen, head gardeners and superintendents of ranches are hired every day, in all parts of California, for less than \$90 a month. Laborers are being employed everywhere at from \$480 to \$540 per annum, and board themselves. Again, the Secretary of State's office has four porters, each at \$90 a month, but the State Controller's office manages with but one and pays him only \$40 a month. Is it not conceivable that the Secretary of State could get along with \$480 per annum for portage, and so save California \$3840 a year? The State should always pay the full market price for labor, but it is ridiculous to pay so much for workmen and porters that hundreds of candidates for appointments crowd Sacramento and waste the time of our officials.

Let us look at the various clerkships. The usual salary is \$1600, and there are so many of them that it is reasonable to suppose that some could be spared. But aside from this, every clerkship could be filled in a week for \$1000 apiece. Any large business firm advertising for clerks would have them coming in by the dozen at \$75 a month. But the State must pay \$133.33! Sixteen hundred dollars was not an exorbitant salary in bonanza days, when laborers had \$3 a day, but now it is far too much. The various deputyships are a weak and an expensive place in our system. There is a well-grounded suspicion that sometimes an officer makes his deputies do most of the work and spends his own time looking after political fences. Relatives who may or may not be fit deputies are often appointed. The salary paid to deputies is usually too near that of the head of the office. The State Librarian, for instance, gets \$3000. He has no less than three deputies—one at \$2400 and two at \$1850. Still another man in that office—George E. Clark—who has now been elected head of the San Francisco Free Library, and who probably knew more about the contents of the State Library than any one else there, received but \$1800. People who know him say that he was competent to have sole charge of the library, and he remained the sole Republican in a Democratic office. But then he has a national reputation as a librarian. The Superintendent of Public Instruction has usually appointed his wife as deputy. This makes the total family income \$5400, or nearly as much as the Governor re-

ceives, with much less official expense. There are doubtless cases in which the wife of a successful teacher is equally competent to serve in the office; but the principle is a bad one, and must often necessitate extra clerk hire. It is a good old-fashioned idea that a man at the head of an office should not put members of his own family into deputyships, clerkships and other places of trust, honor and profit. The reasons are plain. The State often has less valuable service. There is a greater temptation to cover up wrong-doing. The official who appoints members of his own family cannot be the stern task-master that public service demands. Read the State roll; everywhere one finds nepotism. It is one of the weak spots in our system.

J. M. H.

Rainfall and Temperature.

The following data for the week ending 5 A. M., January 2, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.	Total Seasonal Rainfall to Date.	Total Seasonal Rainfall Last Year to Same Date.	Average Seasonal Rainfall to Date.	Maximum Temperature for the Week.	Minimum Temperature for the Week.
Eureka.....	1.82	19.59	24.63	15.50	50	44
Red Bluff.....	1.70	13.17	9.60	11.40	54	40
Sacramento.....	.72	11.28	5.38	8.23	52	40
San Francisco.....	1.45	12.67	7.45	10.01	54	42
Fresno.....	.76	4.95	1.77	5.00	56	40
Los Angeles.....	.62	5.19	4.76	7.50	64	46
San Diego.....	.54	2.02	2.17	3.75	62	44
Yuma.....	.06	2.17	1.42	1.80	68	42

The Care of Young Chicks.

TO THE EDITOR:—The most important thing for the first twenty-four hours of a young chick's life is the proper amount of heat. When under the hen about the same temperature is given to the eggs hatching and the chicks hatched, and it is a great mistake to take chicks from an incubator where the temperature is about 102° and put them in a brooder where the temperature is between 80° and 90°; 100° is none too warm for the little chicks for the first two days at least, provided the ventilation is good and a constant current of fresh air is entering the brooder. Let a chick become chilled and bowel trouble will develop in a short time, while with good warm quarters and fresh air there is very little danger of any sickness.

After twenty-four hours give the newly hatched chicks hard boiled egg chopped fine mixed with oatmeal, about half and half. I find that the chicks relish it more when the oatmeal is dried or parched in the oven before mixing with the egg. This allows the mixture to be a dry one, and chicks thrive much better on dry than wet rations. Sometimes I mix a little sharp, clean grit or sand with their food, if not it is placed where they can easily reach it; also some fine charcoal, which they eat with avidity and which aids digestion. I also give them water from the first, all they can drink, having a fountain arranged so they cannot step or fall into the water. See that the fountain is kept scrupulously clean and the water fresh.

For the first ten days I feed every two hours, giving them a little at a time, only what they will eat up clean; at about the third day I begin to decrease the quantity of egg, making the proportion of meal larger, also give a feed of cooked cracked wheat at night. The cracked wheat should be cooked as dry as possible; the chicks do not like it clammy or sticky. After it swells, if left on the back of the stove until the water has steamed away and the kernels are separate it will be just right for them. I also begin to feed chopped onion at about the third day; if onion cannot be procured lettuce, cabbage or clover will do, but I consider onion the very best of green food for chicks. I generally give it for their noon feed in place of the grain or egg and meal. They soon become very fond of it; as the fumes come up into their faces they shut their eyes and look like a very sick and drooping lot of chicks for a few seconds, then they greedily eat until again overcome by the odor, and rarely do they stop eating until the last bit is gone.

A close watch must be kept during the ten days for drooping chicks. Often one will be found whose crop is distended by gas; a teaspoonful of baking soda dissolved in a cup of water, and a teaspoonful of the mixture given two or three times a day, will usually bring the little fellow around all right.

If any bowel trouble is noticed add fine charcoal to their onion feed, and in a short time you will see a decided improvement. But eternal vigilance must be used to take the little disorders when they first

appear, if one would be successful with these simple remedies.

After the fifth or sixth day vary their food still more, giving bread which has been soaked in milk and squeezed dry, a little meat chopped fine, some uncooked cracked wheat, and daily decreasing the amount of eggs. Any scraps from the table are greatly relished by the little youngsters.

It is of the greatest importance that meat or vegetables given them be chopped fine; remember that the grinding takes place in the gizzard, not in the crop, and a lump of meat may be forced down the throat of a greedy little fellow that cannot pass from crop to gizzard. When the obstruction remains the chick soon dies, as no more food can pass to the gizzard and that remaining in the crop soon ferments. I had a very promising youngster die and could not see any reason for it, but a post-mortem revealed a hard bit of cabbage stalk clogging the passage from crop to gizzard; so from dearly bought experience I emphasize chopping meat, etc., very fine.

If the weather is fine allow the chicks to make their first excursion out of doors when they are ten days old; but they cannot be turned out and left alone for any length of time, for some, weaker than the others, will become tired, and unless the weather is very warm may be chilled. They have no mother to call them when they begin to give their tired, cold peep, so their owner must be on hand ready to return them to the brooder as soon as they show that they are beginning to feel unhappy. It will be several days before they will learn to go to the brooder for warmth, rest and feed. A slight illness now will retard the maturing of the chick a month or more, while if they can be kept growing right along early maturity will be the sure result.

Don't be in too great haste to let them out of doors. If the weather is not favorable, or if you do not have the time to devote to them, keep them in the brooder. I have raised several broods of fine, healthy chicks which did not go out of doors until they were three weeks old; but if they remain indoors so long they must be kept busy. Hang meat, cabbage or lettuce so that they have to jump to reach it. Give them boxes of straw in which fine grains are scattered, that they may scratch for it; give them bones on which a little meat remains, that they may pick at them. This is particularly necessary with the active Spanish breeds that will surely get into mischief and eat each other unless kept busy. I have never had this trouble with the Asiatics.

From ten days until three weeks I feed the chicks five times a day, unless the days are very short, when four times will be sufficient. They should be fed as soon as it is light in the morning; if it is not convenient to feed them so early, then food should be left the night before where they can get it at day-break. I always make it a point to feed mine at daylight, as I generally give them warm cooked cracked wheat for their breakfast.

As they increase in size, decrease the number in each brooder or they will crowd and the smaller ones will be trodden on and killed. A brooder that will hold seventy-five at first should have not more than thirty-five when they are a month old.

When they are well feathered and able to do without artificial heat, try and fill in the corners of the brooder, as they will crowd together and the ones in the corners will be killed.

From one to two months old feed four times a day, giving variety in feed. From two to three months feed three times, with a generous supply of green food of some sort. Avoid egg food and all highly seasoned food, unless a little red pepper with their soft feed about once a week. When one month old I feed a mash of feed cornmeal, middlings, bran and ground barley, equal parts, mixed with gravy from boiled crackling or meat. A little salt should always be added, and carrots cooked soft and added to it, they like. This with cooked cracked wheat, raw cracked wheat, chopped onions daily, and meat three or four times a week, is a bill of fare that will make them grow rapidly. The mash must be mixed so that it crumbles, not soft like mush.

After three months old feed but twice a day, but give some green food at noon and always make them scratch in straw or litter for their grain.

This may all sound like going to a great deal of trouble, but raising chicks is no child's play I can assure you.

H. F. WHITMAN.

Alameda, Cal.

Root Knot.

TO THE EDITOR:—I your issue of December 8th I notice another article on root knot, by a comparative neighbor of mine. After some study and experimenting in this matter, I have come to the conclusion that pruning is the explanation and cure. In warm, wet, sandy lands the sap starts only in the spring with great vigor, and the excessive pruning so commonly indulged in, shuts off the natural outlet for this sap and consequently it breaks out in the roots in the form of knot, much like a boil on a human being. Root knot is a sap disease and the remedy and cure is not to prune, or very lightly, on trees subject to it.

ARTHUR SHARMAN.

Dinuba.

This is like the other theories—it don't cover the case. The greatest losses from root knot come in the nursery rows on young seedlings which have never been pruned at all.—Ed.

HORTICULTURE.

Thinning Fruit.

A paper by J. W. MILLS, foreman of the University Experiment Station at Pomona, at the last meeting of the Southern California Pomological Society.

November is, no doubt, the wrong season for the discussion of fruit thinning, but if every horticultural topic were only to be brought up at the proper time for its practice, Pomona fruit growers would have to hold monthly meetings.

Although I have passed but one season in your midst and seen the wonderful possibilities of this section that are being rapidly developed, I feel loth to make any criticism on the way which you conduct any of the branches of your business. But there is one thing that I can see has been sadly neglected, and I have taken this opportunity to bring this subject before the fruit growers.

Nature never intends that a fruit tree should bring to perfection for our benefit, more fruit than the tree could support without props. We have selected, culled and improved our varieties of fruit trees, with two principal ideas in view, viz: productiveness and size of fruit; productiveness seeming to have received the greater share of attention. Everybody naturally plants those varieties that assure a fair crop, year in and year out. This is all right, but after we have become masters of the situation so that we can sustain this equilibrium, why do we consent to allow it to be destroyed?

Nearly all varieties of fruit-bearing trees have their "off years," or years of light crops. Of course we do not thin the fruit much then, but when we do have a heavy crop, why do we not thin as much as is best for everything concerned? I suppose it is because we want to make up for the short crop of the previous year, ignoring the fact that a heavy crop, besides exhausting the tree and tending to make a light yield the following year, will give small and inferior fruit.

When a man has an extra heavy crop the first season his orchard comes into bearing and does not thin, I suppose he is not thoroughly posted in his business, or else his negligence is prompted by the desire to get all there is in sight. It sometimes happens, and especially in dry seasons, that all the pleasant anticipations of the fruit growers are not realized. Of course, a person may lack experience and do a great deal of damage by irregular thinning, when he is really anxious to know the proper way.

The fruit growers of the north have passed through this important part of the business and have made for themselves their own rules with their numerous exceptions. We must do the same in southern California if we expect to compete with them in deciduous fruits. Our soil is as varied as that of the northern part of the State, and we may need as many exceptions to our rules.

The growers of the north lay as much stress, if not more, on thinning as they do on cultivation and pruning; these three natural features of the business are all they have to contend with—irrigation being unnecessary. I was under the impression myself, that you could raise an indefinite amount of fruit on a tree, if you could give it plenty of water, but the harvest of the past season has dispelled all such ideas.

There is much doubt as to the proper time to thin, some claiming it should not be done before the fruit hardens, as that is the critical time in the life of the fruit, and if the conditions are not normal, the crop that is left may be ruined by dropping. But it is conceded that the greatest draught on the tree comes with the hardening of the pit, and if we wait until the pit is formed we are placing a tax on the tree that could otherwise be avoided.

One theory in good repute with our northern brethren, is this: If we thin before the pit hardens, we remove from the tree the necessity of forming the useless crop of pits, and the extra vitality is thrown into the remaining fruit. With this extra vital power, the fruit is better able to withstand adversities, and in the end, better results are obtained on an average. Some years young fruit will drop and leave a light crop, no matter how heavy the yield promises to be. This is no doubt due to imperfect pollination.

All of us, no doubt, have noticed before the pit has hardened or even formed, what a wonderful difference there is in the size and appearance of the fruit on two trees, where one has been thinned by hand or otherwise, and the other left to bear its burden, this goes to prove that the sooner the superfluous fruit is removed before the pit hardens, the better it is for the fruit that makes the crop, and consequently the tree itself.

This leads to the question, How shall we thin? How much shall we leave on the tree? That, no doubt, depends upon the character of the soil, and the use to which you put your fruit. If you sell to canners, it seems impossible to get it too large; if you calculate to ship your fruit green, its size depends upon the demands of the market. Some of the northern green fruit shippers were very much surprised and disgusted to find that the immense peaches and pears they shipped to the New York and Chicago markets did not bring as good returns as their

medium sized fruit, though they arrived in equally as good condition.

The question is, How far apart on the limb shall we leave,—peaches for instance? Six or eight inches, I should say, is close enough. It takes courage to do this if you have not seen the result of such thinning.

You start out with a firm resolution to thin to eight inches, and wind up with an average of four or five inches. This will not do. It will pay you better to hire a man who has a grudge against you to do your thinning. Let those who are doubtful try an experiment on a row of trees. Count the number of linear feet of fruit-bearing limbs on a tree and calculate twelve one-half pound peaches to every eight feet. I think you will conclude you are getting your share. Of course a rule that will apply to one orchard may not apply to another; the rule you follow for one tree may not do for the next one in the same row.

The amount of thinning is as varied as that of pruning. A man must have two or three years experience with his orchard in order to know how to thin each tree, and if he is a success even then, you can mark him down an extraordinary man.

I have been impressed with the idea that some of the Pomona fruit growers have made a specialty of raising pits during the last season, and had I not happened to have seen peaches grown in the Pomona valley, that were the finest I ever saw, and had I not known something about the difference in the mode of caring for them, I should have decided that a southern Californian must hunt favorite localities in which to raise his peaches. As it is, I know we can raise a first-class peach most anywhere in the valley if we prune and thin with a bold hand. It takes courage, until we learn the business, to pick thirty green peaches from a limb and leave but two mature, but it is sometimes necessary.

Apricots in the northern citrus belt do not need to be thinned so severely as peaches, yet if the past season's crop is a fair sample of what this country can do with that fruit, there is very little difference in that respect, according to a northern grower's idea.

When all the canners refuse to buy a peach that measures less than 2½ inches in diameter, it will be a good thing for our trees and our market. Both will be in a healthier condition. The sooner we have a local Horticultural Society, with monthly meetings at some regular place to convene, the sooner will this condition of affairs come around.

Cherry Growing in Santa Clara Valley.

H. G. Keesling of San Jose gives the *California Cultivator* a sketch of his views on the cherry crop in answer to questions as follows:

What are the three most popular varieties, and why are they considered so?

Black Tartarian, Royal Ann and Black Republican. They are all three good in quality and excellent shippers. A cherry that will not ship long distances must be discarded, for our local markets are always glutted.

Which variety bears the best and what is the average yield per tree for the three varieties?

The Royal Ann is the heaviest bearer; some trees in this section have borne over 1000 pounds per tree, but these are great exceptions. Probably 200 to 300 pounds of Royal Ann and 100 to 150 of Tartarian and Republican is a fair average yield.

What was the average price received for the fruit the past season?

I suppose you mean net price to us from Eastern shipments. As we are among the heaviest shippers from this point, our receipts will probably be average. They were about twenty-three cents per box, out of which we must pay for picking, boxes and packing box.

There was no material difference in prices of the different varieties.

What was the amount of cherries sent East, and what proportion was consumed for canning purposes?

About 175 cars, or 3,938,225 pounds, were shipped East from San Jose the past season. The amount canned was nominal this year; last year 2,279,205 pounds, or 115 carloads, were canned.

At what age does a cherry tree come into bearing, and are they a long or short lived tree in California?

Black Tartarian, five years; Royal Ann, eight years; and Black Republican, five years. They are not generally considered a long lived tree.

What variety of soil is best adapted to the cherry?

Deep sandy loam, or what we call here "sediment land." Heavy, hard soils will not do for cherries. They are a tender tree, particular as to location and easily injured by drouth.

Mr. Keesling adds as follows: In addition to the answers in cherry questions, permit me to call the attention of any of your readers who may contemplate planting a cherry orchard to some facts regarding the growing and marketing of cherries that have come to me in about twenty years' experience.

That Santa Clara county produces the best cherries in the world is generally conceded by those who are in a position to know. The cost of producing

cherries is somewhat more than other fruits. The trees cost more to begin with and are longer coming into bearing than apricot, peach or prune. They are very expensive to pick and prepare for market. They must be marketed when ready and will not wait for markets to clear up or for the settlement of a strike of pickers or packers. They must go to market in refrigerator cars at a cost of, say 3½ cents a pound. With all the above to contend with, cherry growers have averaged fairly well with their shipments till this season, when, with an unusual crop and little demand from canners, disaster awaited nearly all who shipped their fruit. How much of this break was due to hard times, strikes, fighting among commission men or overproduction is hard to determine, but in view of the fact that there are a great many acres of cherries yet to come into bearing in this county and elsewhere, it would seem prudent for any one who intends to plant a cherry orchard to carefully canvass the whole field before putting his money where he may not find it again.

I have interviewed our assessor and find that the number of cherry trees in this (Santa Clara) county in 1894 is approximately 112,000—7000 more than there were in 1893.

In this connection you might be interested in knowing that the number of acres of fruit trees in the county of all kinds foot up 44,000. Of these acres 5810 are apricots, 9005 are peaches and 14,028 prunes.

TRACK AND FARM.

Wheat as Horse Feed.

We have had much discussion of late on the use of wheat as a food for farm stock of all kinds, but only short references to its use for horses. R. Boylston Hall of Chicago seems to have made a special study of this matter and has collected the testimony of a number of breeders. We reproduce his essay as published by an eastern journal:

I am much surprised at the comparatively little interest taken in the matter of wheat feeding by owners, breeders and trainers of horses, more particularly to light harness and the thoroughbred running horse. The judicious use of this cereal at the farms, and in the driving and training stables, will prove of such inestimable value in the results obtained that its comparative cost—even when selling at much higher figures than now rule—will cut no figure.

First, its use as feed for mares carrying foals, one owner and breeder informs me of his experience in breeding the thoroughbred horse as follows: "Three years ago I began feeding wheat to my brood mares from the first of January, and kept it up till June. My foals came stronger than in any previous year, having bred to a limited extent, say twenty mares a year for twenty years. Have had some satisfactory results for the past three years. This year I began feeding wheat in September, and will continue feeding it through the season, including the term of the mares suckling the foals. I teach my foals to eat it. My weanlings and yearlings have this ration: Wheat, ground, one third; oats, one third; corn, one sixth; bran, one sixth; all by weight. Hay and grass, as much as they wish to eat. I have eight yearlings, thoroughbreds, that average fifteen hands and weigh 800 pounds each. The largest of the lot weighs 900 pounds. I am so well pleased with the results that I shall continue to feed it without regard to its price relatively to other grains."

Wheat and Oil Cake.—Another informs me that he has had very gratifying success in feeding wheat, and says: "I regard two quarts of wheat and one pint of oil meal as equivalent to five or six quarts of oats. I add the oil cake, i. e., linseed meal, as a laxative, wheat fed by itself being found to be constipating, and I at all times mix it with cut hay, cut sorghum, or cut straw, for if fed clean is quite apt to cause griping. This is my second year's experience in the use of wheat as feed for horses. I cut my hay with a Tornado cutter into feed averaging one inch long. Of this I give each animal one-half bushel, by measure, mixed with two quarts of ground wheat and one pint of old process linseed meal. This I consider a full feed for an ordinary work horse on the farm. My stallions I now feed twice each day half of the above quantity of wheat, but at each feed the same quantity (one half bushel) of cut hay or sorghum. My sucklings I now feed twice each day one quart of ground wheat and a little oil meal at each feed, with as much of the cut hay as they will eat up clean. When weaned the ration will be made slightly richer in wheat meal."

The stock that this gentleman is feeding is of the trotting strains of blood, and he is perfectly satisfied with his experience in the use of wheat. He writes me his sucklings—five months of age are the average when he wrote—are all doing well, and as soon as weaned he shall increase the quantity of meal, that is ground wheat, at each feed. He gives one quart—or its equivalent, rather—one and one-half pounds of ground wheat at a feed, twice each day to his sucklings. He has about ninety head on his farm.

Another party informs me that for horses thin in

THE DAIRY.

E. W. Steele's Beliefs and Practices.

E. W. Steele, of the Steele Brothers, is a pioneer dairyman of California, and his observation and experience with cows under California conditions is of great interest and importance to younger dairymen. We have heretofore given chapters of Mr. Steele's experience, and continue now with the sketch of the same which he prepared for the recent convention of dairymen in this city:

Breeding and Feeding.—In these days when profit in dairying is assailed by oleo productions and by competition from its extension into hitherto unoccupied fields all over the world, it is necessary for dairymen and dealers in dairy products to take counsel together to study the business in all its bearings and branches, and to discover, if possible, and adopt improvements that will bring increased profits. The surprising improvements in all sorts of dairy machinery, and in tools for handling the milk and conveying it into butter and cheese, within the last few years has so far exhausted the possibilities that we cannot look for very much increase of profits from improvements in that direction. But in the very foundation of the business, breeding and feeding, we enter a field which is not yet exploited, and where even what we do know is rarely practiced in a persistent, thorough and practical manner. With all of the thousands of dairymen who are studying, experimenting and practicing new methods for increasing dairy profits, and giving these experiences and discoveries to the world through the press, it would seem as though the subject would become a hackneyed, stale and oft-repeated story. We must consider how few hear of any improvement from one publication of it, though it be in a journal with thousands of readers, and that, when brought to the attention of those interested, how often and insistently it needs to be repeated before it becomes like the alphabet in familiarity and ready for use on all occasions when required. Breeding and feeding are subjects capable of such infinite combinations that they can never be exhausted. Their investigation will ever repay the practical man with valuable discoveries and surprises. I have often in the past heard farmers say, "Feeding is breeding, particularly with regard to hogs," by which it was meant that good feeding produced good stock, which is true in the sense that without good feeding we cannot have well developed stock of any kind. It is also true in the sense that a persistently well fed individual acquires more or less development which he can impart in some degree to his progeny. If we can admit this little proposition, and no farmer will for a moment deny it, then as a logical and inevitable sequence it follows that breeding and feeding under the most favorable circumstances for generations will produce improved types of all kinds.

Domestication of the Cow.—We know that the power of the cow to put butter fat into her milk depends upon her nervous temperament, her contentment, as well as the food which she eats, and that she must be domesticated and educated for the dairy. Wild herds are never large butter or milk producers. Nothing so surely and speedily becomes educated into our animals and thence hereditary, as results of kindness, and special treatment and feeding to develop the qualities we desire. If our animals learn to love and not fear us, they will soon understand what we want of them and right loyally will they repay our kindness. Once upon a time a partially broken span of colts, when playing, got too near and slid into a deep ravine, where they stood imprisoned several hours before I discovered them and helped them out. The ravine was narrow and covered on its sides with briars and brambles. When the colts heard me parting the brush in looking after them they signified their delight in whinneying, although before this I could not catch them in an open field. After this they no sooner discovered me in the field than they at once came to me in the most friendly manner. In 1877, the dry year, we drove cattle from San Luis Obispo into Humboldt county. Several head gave out one very hot day going over Rattle Snake mountains, where there was no water, among which were several old dairy cows and one two-year-old steer. I came along the next day in the stage, and seeing some cattle in the brush, far from water, and thinking that they might have been dropped out of our drove, I asked the driver to stop and I found this the case and that they were furnishing for water. In fact, the steer was already crazy and would dive at me every time I came near him, but the old dairy cows knew me. At any rate they at once got up and started toward me, lowing piteously. They were so human in their address and appeal that it affected me to tears. I went in the stage to the next station, procured a mule and bucket and packed water up the mountain from a spring for them. I set the bucket down as near the steer as I could without his diving at me, and then threw rocks at him to get him headed toward the water. Directly he snelt it, he walked up to it and drank it. By the time I got up with the second bucketful he was rational and came directly to me for the water, and after he had drank it, he would allow me to handle

and pet him and manifested his gratitude in every way. I drove him on a few miles to where there was water. Though hungry, I needed but to speak to him to bring him again to the road if he wandered to feed. The extent to which a domestic animal may be educated on natural lines which thence becomes hereditary, if understood is not fully appreciated.

A cow cannot have it in her disposition to do the best for an attendant who ill treats or insulicently feeds her—who does not give her kind words and appreciation.

Milk secretion is a motherly function and is regulated by food, environment, education and her love of offspring, and her attendant, on whom she realizes her dependence, if he is wise, will take the place of her calf in her affection. A blow, a cross word, or any disagreeable exciting cause will affect the quantity and quality of milk given by a cow at once, and a continuation of disagreeable circumstances will have a permanent effect upon the milk, both as to quantity and quality, and subsequently on the offspring. We have all seen the ingenious ugliness educated into the Spanish horse by their cruel treatment from generation to generation.

Development of Dairy Breeds.—The history of the development of our leading dairy breeds fully sustains this proposition. The Jerseys, the Guernseys and Holstein-Friesian cattle are mostly milked and handled by the women in their places of nativity, and they are always treated with the utmost kindness—are almost members of the family.

The low, level, wet, diked land of Holland, with its abundant, moist and succulent pasturage, has beyond a question given the Holstein-Friesian cow her large size and milk-producing qualities. The peculiarities of feed, care and breeding for long years have made the Jerseys and Guernseys what they are, and beyond question they are now all fixed types, and will under continued favorable circumstances reproduce their several characteristics. The Holstein-Friesian cattle have been bred for the dairy for two hundred years. Surely the man who wishes a profitable dairy cow is not wise in his day and generation if he does not avail himself of all this stored heredity. This is clearly shown by the milk and butter received of these breeds within the last few years. I am aware that many dairymen do not believe in these large records as attested to by private dairymen and herd owners, and think that the tests at the World's Fair at Chicago, made under strict test conditions, show exaggerations in tests not so guarded. That there are sometimes exaggerations is quite easy to believe, particularly in tests of a day, week or month, as the cow may be gotten up for the occasion, and will, of course, be taken when she is doing her very best. But I think it is undue skepticism to throw out the long tests made and attested to by reliable people.

Mr. Steele's Holstein Records.—I have had a record kept of the weight of the milk produced by my Holstein herd ever since it was established. It was kept for my own use for breeding and feeding purposes by my own employes, and some of the time under my own personal supervision, and I have no doubt of its correctness. I will give you a few of them:

Queen of Pacific, in two-year-old form, in 461 days, gave 14,703 pounds of milk; in ten months, 10,744 pounds. In three-year-old form, 18,004 pounds in one year; 17,878 in ten months. Four-year-old form, in 340 days, 18,176 pounds. Five-year-old form, 13,845 pounds.

Lucy of Pacific, two-year-old form, in one year, 10,233 pounds. Three-year-old form, 11,457 pounds. Four-year, 13,480 pounds in ten months.

Katie of Pacific, two-year-old form, 9840 pounds in 344 days. Three-year-old form, 13,480 pounds in one year. Lucy of Pacific and Katie were twins.

Mabel of Pacific, three-year-old form, in 299 days, 13,153 pounds. In four-year-old form, in 293 days, 12,480 pounds. In five year-old form, in 276 days, 14,288 pounds.

I have other records nearly equal to these, and some larger, made by this herd, but I cite these because they are continuous. At the time the first of these records were made the Babcock test was unknown. At the present time the milk of this herd tests from 2.5 to 4 per cent, averaging about 2.8 per cent.

I am now having the milk tested monthly, and a record kept of the percentages of fat, so that hereafter I can accurately compute the yield per year of the herd, which I have already done with some individuals of the herd.

I have made close estimates by general average, and I am confident that my Holstein herd of about forty cows averaged to make about 415 pounds of butter each during the last year, but this is only an estimate from the weight of the milk and general average of the butter fat as far as we have kept it. I only give it as an estimate from imperfect data. I think that a cow that will not produce at least 275 pounds of butter in ten months should be discarded from the dairy. I am aiming at 400 pounds on the average. I will give a few more of the noted records made as attested by their owners and attendants. The following records are by noted Holsteins:

Pietertje, bred in Holland, holds the milk record of the world by 30,318 pounds made in 1887, and attested by her owners.

Pauline Paul, another Holstein cow, holds the but-

flesh he has given them one pint of wheat to three quarts of oats, having the wheat ground not too fine, but well broken, and occasionally he mixes in a small quantity of corn. He says there seems to be something about this mixture that adds energy and life. From the many other experiences that have come to me since looking up the matter, I am satisfied that, gradually, a much larger percentage of wheat can be used to a very great advantage in proportion to its mixture with other grains. It seems to be the opinion of those who have used this grain to any extent, that is equal in its essential properties, about in proportion to its furnishing as much of the desired qualities of health, growth and strength for the horse bred for speed, as the ratio of one quart of wheat to nearly three quarts of oats, both being taken as to measure, not weight.

Nutritive Value of Wheat.—It seems thus to be conclusive, that wheat contains as much of the essential properties in one measured quart as is contained in nearly three measured quarts of oats. Now, as the stomach of the horse is known to be, comparatively, not very large, certainly if the same amount of nourishment can be obtained from one quart of bulk as can be obtained from nearly three quarts in bulk of nature's foods—as they are grown, not concentrated preparations—one would naturally suppose much benefit would accrue to the animal by thus relieving the stomach from being required to care for a useless quantity, with no resultant benefit to be acquired by digesting it. So far it would seem that one bushel of wheat, ground, mixed with four bushels of oats, all by weight, would be about the proportion to make feeding wheat a success. This would be just one-third wheat and two-thirds oats. Occasionally, in fact daily, a handful of oil meal is good for horses that are used for speed purposes and general road driving. It helps to keep the bowels healthy in their action and the hide loose through the fall, winter and early spring. Grass can take the place of this when it can be had. Some parties have used ground wheat by itself, not mixed with other grains, but mixing it with wet bran instead. From the best information obtainable on the subject, and as so far shown in the foregoing experiences, it does not seem to strike the writer that such is the most judicious manner in which to use wheat as feed for horse stock. Particularly so when there exists grave doubts in the minds of many owners and breeders as to the utility of bran as a component part of the food of a horse. For my own part, I do not, and have not in many years, believed in its use, and have not fed any to my own horses, or to those that I have had any care of, in the past twenty years.

Cooked Food for Races.—I have used with great and gratifying success, for horses being driven and speeded, and in training and racing, almost daily, cooked oats as the right feed for each day, boiled or steamed to double their natural size. Steaming is far preferable if a convenient way is at hand to cook it in such a manner. There is economy in this. Three quarts of cooked oats will go as far in nutritive results as five quarts of raw. Why would it not be a good food, and possibly the best, for weanlings, yearlings, brood mares carrying the foal, and brood mares suckling the foal, to feed them once each day, and twice in cold weather, if possible, oats and wheat mixed in the proper proportion, as given above, and cooked together in the manner advised for cooking oats, and for driving horses such a feed for supper each night? This need not be given hot. The cooking can be done at any convenient time during the day and fed cold after the water has been drained off.

To sum up, it may be considered as an indisputable fact that wheat judiciously fed is far superior to oats, corn, or any other grains used in feeding horses, mares, colts and foals. It promotes in young stock a more rapid growth, maturing them in health and strength at an earlier age than any other known feed, fed in its proper proportions as mixed with other grains; for it must not be mixed by itself, but must be mixed, and must be ground, soaked or cooked about as herein directed. It promotes rapid growth of bone and muscle, and produces less fatty matter. It is a much superior milk producer for mares suckling foals, to either corn or oats, and it creates more development of real strength. Scientific tests have shown that wheat contains a much larger percentage of the elements herein claimed for it than either of the other grains mentioned, and which it is sought to have it, to a beneficial extent, take the place. It is so far superior to the other grains in its resultant benefits, when properly used, that its cost compared to them cuts no figure, when its first cost shall be even above their prices in the market, proportionately. For instance, yearlings, fed liberally up to the limit as directed herein of wheat, shall be found to be nearly as strong, healthy and mature as two-year-olds fed by the usual process, what figure does the slightly increased first outlay (granting there is such an increase) of money out in comparison to the acquired results? None, of course. This is mentioned as an inducement to owners and breeders to use some wheat, even when it costs much more, relatively, than corn and oats; whereas, at present prices it is the cheapest feed that can be had, as regards simply first cost, and not even figuring resultant benefits.

ter record of the world, 1153 $\frac{3}{4}$ pounds of butter in one year, made from 18,669 pounds of milk, averaging a pound of butter from 16.18 pounds of milk. This cow is owned and record attested to by Dutcher, ex-president of the Holstein-Friesian Association. This cow was bred in Iowa and made the record in 1890.

DeKol 2d holds world's four-year-old butter record for seven days with thirty-three pounds seven ounces. Twelve and sixteen-hundredths pounds of milk made one pound of butter.

A Jersey cow holds the second yearly butter record of the world, 1047 pounds. Her name has escaped me. She consumed thirty pounds of grain daily during the test. [Signal's Lily Flag.—Sec'y.]

With the records of the Guernseys I am not familiar. These records and the World's Fair tests demonstrate the capacity of the thoroughbred dairy breeds to convert large quantities of food into butter fat.

Why Then Breed Scrubs?—In the light of such examples how can any intelligent man fail to see the advantages of such for dairying and foundation stock. To develop such cows from scrub stock will take many generations of intelligent and careful feeding and breeding. It demonstrates that types of dairy cattle have already been established that reproduce themselves with great certainty. But these largest producers are exceptional even among the thoroughbreds. And even the thoroughbreds to fill the dairies are not within the reach of all. The way that is within the reach of all is to grade up from thoroughbred bulls from milking breeds, such as Jerseys, Guernseys, Ayrshires of individual merit, and whose ancestors for several generations—the more the better—have large records—the larger the better—as butter producers.

There are families within each breed that are far in advance of the breed generally as producers. Though the dairyman that uses only thoroughbred bulls of dairy breeds may consider himself in the line of progress, remember that the bull is only half of the herd and when potent blood is concentrated in his veins for generations, will almost certainly transmit it to his offspring. It would be better to have the great milking cow too to breed from, but that, at present is not possible for all. But every dairyman can have a thoroughbred bull of some milking strain of blood. They are so cheap now that not to use them is a sin against their own interest—I had nearly said a crime—similar to suicide in kind though not in degree.

I believe the Holstein bull is to-day the best bull for general use to develop foundation dairy stock. They reproduce their characteristics with certainty, having capacity for food and making good use of it, strong constitutions, and cows of this breed hold the world's record for largest production of butter and milk in one year. The best Holstein breeders are now breeding toward richness of butter fat in the milk—12.16 pounds of milk for one of butter has already been reached by some of the thoroughbred Holstein cows. In my opinion we must have capacity for a large flow of milk for large feeding capacity, as well as the nervous temperament, in the coming dairy cow. All of these points the best families of Holsteins now possess.

The Holstein-Jersey Cross.—I know by experience that the cross of thoroughbred Holsteins upon thoroughbred Jerseys, and no doubt upon any other good cow, is a good one, although many breeders advise against cross-breeding. I have never failed to produce an extra cow by this cross. I am milking a six-year-old cow now, thus bred, that last year produced 662.75 pounds of butter, as ascertained by weight of milk, tested monthly by Babcock test for butter fat. The amount of milk in each month, multiplied by percentage of butter fat for that month and thirteen per cent added for butter, which we have proved by actual test by weighing milk and computing butter fat by test and churn many times, we find the percentage of butter fat to butter in our dairy. This cow came in again in August and is now giving from 50 to 54 pounds of from 4 to 4.6 per cent milk. She is Holstein color; between Holstein and Jersey in form and constitution and milking qualities. This cow is my idea of the type of the coming dairy cow, of whatever breeding she may be. In her two-year-old form she made on the average 1.6 pounds of butter daily the year through. She never stopped milking and came in and immediately made one pound of butter per day. She is now in her six-year-old form, and from present appearances will this year beat her previous records. I have had a number of Jersey grades that made 300 pounds of butter with first calf, but my grades have been larger producers than my thoroughbreds. My thoroughbred Holsteins have been larger producers than the graded Holsteins.

How to Feed a Cow.—In my opinion the coming dairy cow for general use should produce about 50 pounds of from 4 to 5 per cent milk, and hold out well for ten months in the year. To do this a cow must be fed every day or get from the pasture a fairly well balanced ration and enough of it, with grass and what good hay she will eat to balance the rations. I have never yet found any ration that will produce so much butter as an abundant pasturage of our native grasses with what good hay they

need to balance rations. Let the cows decide the quantity of hay they need. Our native grasses are principally burr clover, alfalfa, wild oats and bunch grass. For a soiling ration for cows of about 1000 pounds weight, giving say about 35 pounds of 4 per cent milk, 30 pounds of ensilage or 40 to 50 pounds of roots or squash, and what good hay they will eat, is about proper. After they have had grain and root or ensilage ration and 4 pounds of ground barley and 4 pounds of ground horse beans daily; or 12 pounds of grain, one-third each of ground oats and barley, or corn and bran; oilcake or cottonseed meal—about 2 pounds—is good with 10 pounds of grain, but this is too expensive for our locality. All of the rations excepting the last can be raised by the dairymen themselves. In California I think that barley and horse beans can be raised the cheapest. Many other good rations could be compounded, but I mention these as being the best and cheapest for California dairymen.

Feeding for Show.—With regard to the immense rations fed to the great Holstein and Jersey cows when they made their world-beating records, they are abnormal and not business rations. They are dangerous to the cows and don't pay in butter and milk production. They are permissible only for development purposes for short seasons—say a year at most—and to advertise one's herd.

The Jersey cow, Mary Ann of St. Lamberts, during her seven days in which she made 36 pounds of butter, ate a ration of 25 pounds of oats, 17 pounds of pea meal, 6 pounds oilcake meal and 2 pounds of bran—in all 50 pounds of grain daily, besides pasture.

The Jersey cow, Princess 2d, during her seven days in which she made 46 pounds 12 ounces of butter, ate 20 pounds clover hay, 30 pounds of carrots, 22 pounds of oatmeal, 23 pounds of pea meal, 4 pounds oil meal and 1 pound of bran—50 pounds daily of grain besides the clover hay and carrots. The cow was finally killed by crowding her with rations that she could not digest. It is the contention of most of the scientific and theoretical met that butter fat cannot be fed into milk—that rich feeding only increases the quantity of milk. Farmers and practical dairymen, on the other hand, believe that fat can be fed into the milk. Cows that are persistently fed rich rations increase in both quality and quantity of milk, as compared with starvation rations. Even a mature scrub cow will respond to good rations from year to year till the full extent of her natural ability for development and her power to consume and digest rations is reached.

Local Experience.—It takes a cow in good condition from ten to twelve days to fully respond to a ration. Increase of milk always comes first. In looking for the increase of butter fat by feeding, we must look at it by the year instead of short periods. To illustrate what I mean, I will give a little of my experience. In 1891, at this time of the year, I was feeding rations of from twelve to fifteen pounds of grain daily, composed of ground oats, corn meal, bran, shorts and one pound of ground flaxseed, with hay, and later, squash and roots, or ensilage—of squash or roots, 40 pounds; ensilage, when fed, 30 pounds. This had been fed persistently the whole year, except when grass was good.

Growing Alfalfa.—Alfalfa, where it can be raised, is perhaps the cheapest food for cows. It can be grazed, put in the silo, or cured for hay. It will grow in land too loose and gravelly for other crops, if irrigated till its roots strike down to moisture. It will produce several crops in a season; will grow in a dry season. There is nothing that will keep up the flow of milk in a dry season like it. We should sow it where it will grow and keep a stand where it can be irrigated by patching the killed out places early in the season. Cultivate with a spring-tooth cultivator. It will not injure the roots of the old alfalfa, but rather thicken them. Continue cultivating until the weeds are done coming, then, the land being fine, re-seed the missing places. Dig wells where abundant water can be found and pump water for irrigating. Find and develop artesian water for same purpose.

THE FIELD.

Alfalfa Growing in Butte County.

D. Streeter, Biggs.—I have been on this coast forty-two years, as a farmer and stockman, and have never found any kind of grass or grain that will furnish one-half the pasturage or hay that alfalfa will. My own experience with the crop covers thirty years, and for the past fifteen years I have had from 100 to 140 acres. My largest field is on river "bottom," and there is also some "second bottom" and upland with clay soil and subsoil. "Hardpan" is found three or four feet down, but it is always porous, being worked by worms and insects. This whole valley is underlaid with a lava-bed rock, or "hardpan," which is moist and easily bored, and water is found at twelve to sixteen feet. I do not irrigate, but some of my neighbors do now and then. Some water for the purpose is provided by wells, some is pumped from the river, and some comes from ditches. In this valley we bore a well with a six-inch auger, fifty

or sixty feet deep, fit in a large pump, run by steam or gasoline or horse power. The irrigation ditch furnishes the cheapest water. We sow in February or March, after plowing six or eight inches deep and harrowing well, using twenty-five pounds to the acre, and covering it one inch deep. The little birds are troublesome here, and make it difficult to secure a good stand. As soon as the plants are eight or ten inches high, they should be mowed, to make them stool out; and it is well to let the first crop lie on the ground for shade. The second and third crops may be used for hay, and for pasture through the fall and winter; but if the land is clay, it should not be pastured while wet. Two or three years are required for it to make its full growth, and often the gopher works on the stand so badly that it is thinned out, and has to be replanted in the bare spots with corn. I have tried wet, heavy soil in Oregon, and failed; tried heavy "adobe" soil, and had little success; and I have some alfalfa that is thirty years old on clay. We have four to five cuttings a year, and six to seven tons of hay, from a good stand. In this State the second crop is best liked for seed, and it is harvested when the seeds in the top pods are full size, handled as the hay is, and thrashed with a machine. The hay is cut when in bloom, allowed to dry about one day, raked into windrows, cocked and stacked in long, narrow ricks, well salted. If the hay is put in barns, it is well to fill them slowly, putting some in each every day. It will keep in bales of any size, and 200 pounds is the usual weight, costing, to prepare, \$1.50 a ton. The selling price of hay on the farm is from \$5 to \$6 per ton; and of the seed, from 7 to 10 cents a pound. The straw is worth only about one-third as much as alfalfa hay, because in maturing the stalks become dry, woody and difficult to digest. Hogs wintered well last year on alfalfa hay, and the pasture is excellent for them. In March I put sixty head of stock hogs on a two-acre lot, and they have done well there all summer, while the alfalfa grew so tall that it had to be mowed. Except in the early spring, when they are liable to bloat, the pasture is profitable for cattle, as it is also for horses and sheep. Old straw or hay in the field where the cattle can get it is ordinarily a preventive of bloat, and, after the rainy season is over, there is little danger. I have a neighbor who has cut ten tons per acre, several different seasons, without irrigation. Land that is well drained, and will raise corn, will produce alfalfa, and I think it well worth a trial anywhere.

John S. Hutchins, Central House.—I have had twenty-five years' experience, with from 100 to 200 acres of alfalfa, grown on river "bottom" with heavy, sandy loam, from twelve to fifteen feet deep, below which is water and gravel, the soil never becoming dry. The best time for seeding here in northern California is between the 15th of February and the last of March. I use about thirty pounds to the acre, and sow with barley or oats after the grain has been harrowed in, and then go over the ground again with a light harrow or brush. The grain crop keeps the weeds down, and, after the former is cut, the alfalfa grows vigorously, and prevents further trouble from weeds, producing two crops of hay the first season. I never irrigate. In this climate there is no danger of winter-killing. After the first year there are usually four crops of hay, yielding from two and one-half tons per acre the first time to one ton the fourth. The best hay is secured by cutting when the plant begins to bloom. I have it raked the next day after cutting, cocked, and about the fourth day have it hauled into the barn. The second cutting is the choice for seed, after the first year, and this should become very dry in the cock before it is stacked. The full yield is attained about the second year, and the plant continues vigorous for six or eight years without reseeding. After that length of time I plow it up and plant to corn to kill the foxtail. Two plowings will easily kill it all, when it is desirable to clear the land, but the roots are too deep and large to make it a satisfactory green manure. There seems to be little difference between the hay grown without irrigation and that which is watered, but possibly the former is somewhat stronger. I have cut ten tons of hay per acre on a tract of twenty acres for several years, but this included five cuttings per year. My alfalfa land is worth \$100 an acre, and it costs about \$1 a ton to cut and haul the hay. Baling costs \$1.50 a ton; and, while the size does not affect the keeping quality, the weight most wanted is 250 to 275 pounds. For thrashing, the ordinary machine is not satisfactory, and a clover huller is needed. The average selling price for loose hay has been about \$5 a ton, and the seed has sold for about ten cents a pound. The hay that has been ripened and thrashed for seed has not much value for feed. For feeding farm animals, the hay is about equal to clover, but for work stock I would prefer timothy, as alfalfa is too washy. The pasturage is excellent, and, while it will afford about double the quantity that red clover will, on account of its rapid growth, I do not regard it as so strong a feed. Twenty head of hogs can be pastured on one acre, and I have had them gain from one to one and one-half pounds per day. In the spring, when the young alfalfa is growing very fast, cattle are liable to bloat if pastured in the morning and evening, although in the middle of the day there seems to be no trouble from that cause.

THE HOME CIRCLE.

A Child.

Old signs are written in thy tender face,
Desires, regrets that thou hast never
known.
Thou art the heir of thy aspiring race,
Heir of a troubled throne.
Of hope, that hardly dost portend the morn,
And sadness, that has scarcely guessed at
pain,
God takes the characters of fate outworn
And writes them fair again.
Those little feet, that scarce the light turf
press,
Those little hands, so brown with wind and
sun,
God grant they tremble not for weariness
Before thy course be done.
And thou shalt love and learn what love is
worth,
And thou shalt trust and learn to value
men,
And all the sudden mysteries of earth
Shall open to thy ken.
* * * * *
What, wilt be lying? An I then too staid?
Can I not smooth the meditative brow,
Flash through the sun and flutter through the
shade,
As birds from hough to bough?
What, dost thou linger? Ah, my dear, how
much
Thou givest, couldst thou only understand!
The kiss of childish pity and the touch
Of thine absolving hand.
—Arthur Christopher Benson.

The College Graduate.

He sent his son to college to store his head
with knowledge.
"I need a smart young fellow in my busi-
ness house," he said,
"And when he's educated, why, bein' so re-
lated,
He's just the one to take the reins and
drive up to the head.
"They say he quite surpasses all the fellows
in his classes,
And I reckon he'll think nothin' of my
rather taxin' load.
I'm gettin' old and weary, but it makes the
future cheery
To think of leanin' on my son adown life's
western road.
Well he trod a path of glory, did this stu-
dent of my story,
And they dined him and they wined him
on his final college day;
But he broke each rule of grammar when he
spoke as with a hammer,
And his knees they knocked together if
you mentioned algebra.
But he shone forth as a sprinter, and he
trained the livelong winter
For the spring and summer races, where
his record was most fine.
And the old man looks reflective and thinks
college rules defective,
While his son goes round the country with
a jolly baseball nine.
—Ella Wheeler Wilcox.

Mrs. Tyler's Hard Times Dinner.

The chill north wind swept down
across the Dakota prairies, roaring
through the leafless poplar trees, rat-
tling the sashes of the unpainted farm-
house, and saucily blowing the skirts of
a brisk little woman who ran down the
path from the house to the road.
"Good evening, Mr. Morgan."
"Good evening, Mrs. Tyler. Thought
I'd bring down your mail. Knew Ly-
man couldn't get to town."
"I am ever so glad you did. We had
been wishing for it. Thank you. And
how is Mrs. Morgan and the children?"
"All well, thank you. How is Ly-
man getting on with that sprain?"
"Niece. Think he will be about in
a week. I have hard work to keep him
quiet now."
"He must not bear his weight upon
his ankle until it is quite well. If you
need help let me know."
"Thank you; we may need some, but
at present we are getting on finely. I
can do the chores, and the drouth har-
vested our corn."
"I know how that goes; but you are
more fortunate than many about here.
You have feed for your cows."
"Yes, we have much for which to be
thankful, although there are only small
potatoes and salt pork in the larder.
But short crops and chicken cholera
can't last forever."
"Mrs. Morgan says you have the
New England 'grit,' and that's a good
thing to be thankful for these hard
times. But I must be going on. It's

pretty cold for the time of year, isn't
it?"

Mrs. Tyler looked over the budget of
mail. Several papers and a letter for
herself. She stopped as soon as the
kitchen door had shut out the bluster-
ing wind and tore open the envelope.

Five minutes later she stood before
her husband with a comical look of dis-
may on her fair face.

"Of all things!" she exclaimed.
"Beth Cady is married to a traveling
man—Dunlap is his name—and they
are coming to spend Thursday with
us!"

"Thursday? The day after to-mor-
row?" queried Mr. Tyler in a puzzled
way. "How's that?"

"Why, her husband is traveling
through Dakota in the interest of some
hardware firm, and she is accompan-
ing him. They reach Milford Wednes-
day night, and must go on the next
night, so will drive down here Thursday
morning and spend the day. She and I
were great chums. You remember
meeting her at our wedding, do you
not? I would really like to see her,
but for pity's sake what can I give her
to eat? I don't want Beth to think us
poor or even temporarily unfortunate."

"As we are," said Mr. Tyler, smil-
ing. "Never fear; I'll trust you to dis-
arm suspicion by getting up a number
one dinner. It will not be the first you
have gotten up out of nothing."

"But I have no meat excepting pork.
There has never been a time since we
lived here when I could not roast a
chicken. But who wants to eat a
cholera-stricken fowl? I do not dare
cook a healthy-looking one for fear it
might be just coming down with the
disease."

"If it were not for this miserable
sprain I could go down town to-morrow
and buy some provisions. Guess I
would have to mortgage a cow or pawn
a dog, though," he added bitterly.
"My pocket-book is in a state of col-
lapse."

"I do not suppose Mr. Morgan will
go to town again to-morrow, or I could
send some eggs that I have packed and
exchange them for meat."

"Confound this dried-up country,
anyhow!" exclaimed Mr. Tyler. "Can't
even raise white beans here!"

"Oh, yes, we can," said Mrs. Tyler,
cheerily. "Above all things she did not
want Lyman to get the 'blues.'"

"Our crops were pretty good last
year; and that reminds me—we have
plenty of beans. I will bake a jar of
them with pork. And those early peas
I canned will make a good soup. I be-
lieve I have enough dried pumpkin up-
stairs, left over from last year, to make
a pie. Then there are the dried apples
Aunt Abbie sent. Oh, they will not
go back to Milford hungry!"

"I can trust you for that," re-
sponded Mr. Tyler. "But don't get
worried and tired out so that you can-
not enjoy your friend's visit."

Before she slept Mrs. Tyler had taken
an inventory of the provisions on hand
and their possibilities. The dried ap-
ples and beans were in soak; the dried
pumpkin also was gradually softening
in some new milk. The next day was
a busy one. The forenoon was spent
in cooking. A large cube of salt pork,
partially lean, was boiled two hours in
plenty of water, gashes cut across the
top, sprinkled with pepper, sage and
powdered bread crumbs and placed in
the oven to brown. This was to be
sliced and eaten cold. The dried apples
were combined with eggs and cream
and converted into a handsome me-
ringue pie. A savory pumpkin pie and
a frosted cake were stored away in the
pantry. The pork and beans were
ready to place in the oven the next
morning.

"If I only had a turkey or a
chicken," she thought to herself more
than once. "It seems such a meager
dinner to set before guests!"

But neither Lyman, with his sprained
ankle, nor little Jennie with her trouble-
some tricks of "helping mamma,"
heard of any ungratified wishes.

The afternoon was spent in brighten-
ing up the neat little home. Thursday
morning dawned clear and cold. Mr.
Morgan drove into the yard early.

"Did you ever eat rabbit?" he

queried, as Mrs. Tyler came to the
door.

"Oh, yes! Lyman shot several last
winter, and they were very good."

"Mrs. Morgan thought you might
like this," handing out a rabbit. "It's
rather early for them, but it has been
so cold they will be good. I killed two;
this snow gave me a chance to track
them."

"I am ever so much obliged," said
Mrs. Tyler gratefully. "We are ex-
pecting company for dinner. This will
help me out so much. If I could have
soaked it awhile in salt water," she
thought, as she quickly prepared the
rabbit for cooking, "it would have
taken off the wild flavor; but I will
parboil it a few minutes."

The table was laid in one end of the
kitchen, as the house did not boast of
a dining-room; but curtains were drawn
between that and the cook stove, where
the rabbit was simmering and the beans
baking in the oven. Everything was
in readiness, so that Mrs. Tyler could
have an almost uninterrupted chat
with her friend; and how she did enjoy
it! And how they all seemed to relish
that dinner!

"Your Annt Abbie is a famous
cook," said Mrs. Dunlap, as she passed
her plate for a second helping, "but I
shall tell her when I go home that she
never made chicken pie to equal this."

Mrs. Tyler glanced at her husband.
There was a merry twinkle in his eye,
but he held his peace.—Waverly Maga-
zine.

The Dominical Letters.

The Romans used the first eight
letters of the alphabet, A to H, to
mark the consecutive days of their
recurring nundinal period. The early
Christians adopted the same plan for
marking the days of the week, drop-
ping the last letter (H) as unnecessary.
In the church calendar A has always
stood for the first of January, G for
the second, etc., on down to G for the
7th, and then the cycle began again
with A, which would make it return on
the 15th, the 22d and so on.

Each day of the year has thus its
calendar letter, and the letter which
falls on the first Sunday is the "Domi-
nical letter" of the year. February
28th has always the letter C, and March

1st the letter D. February 29th, or
"leap day," has no letter provided for
it, and this makes a change in the
Sunday letter after February, so that
in leap years there are two Dominical
letters. As the common year contains
fifty-two weeks and one day, the
Dominical letter changes from year
to year, always going backward one
place for a common year, and two
places for leap years. This mode of
representing the days of the week has
been uninterruptedly employed in the
calendar of the church throughout the
Christian world since the earliest dates
in our era.—St. Louis Republic.

The Russian Emperor.

Dr. Wilhelm Koerger, professor at
the Royal Academy of War in Berlin,
writes to us: "In your paper I find a
short article about the title of the Rus-
sian Emperor. As this question seems
to interest the British public, allow
me, who am one of the few specialists
of Russian language in Germany, to
give a few authentic statements on the
subject. The word 'Tsar' (for thus it
should be spelled and be pronounced,
with a slight addition of the consonant
'y' behind 'r') is derived from the
Latin 'Cæsar,' having one common
source with the German word 'Kaiser.'
It is the old Russian, or even Slavic,
term for King, but has, in this mean-
ing, been superseded by this 'Korol'
(pronounced Karol), which draws its
origin from Karl, viz., Charles the
Great. The Hungarian word 'Kiraly,'
meaning King, has the same origin.

"Tsar" now means in Russian (1) a
King of ancient history—Xerxes, Ly-
curgus, Pharaoh, etc.; (2) a King of
fable, fairy tale, etc.; (3) some of the
dispossessed Russo-Asiatic princes; (4)
a rather colloquial expression for the
Russian Emperor. His consort is
called 'tsaritsa,' a son of his, in the
same popular language, 'tsarevich,' a
daughter, 'tsarevna.' But the official
words are 'imperator,' emperor; im-
peratvitsa, empress; their children are
called 'veliki knyaz' (meaning great
prince) and 'velikaja knyajna' (great
princess). When Peter the Great re-
turned to his new capital in triumph,
after defeating Charles the Twelfth of
Sweden, he was hailed by the metropo-
lite with the title of imperiator. Since

Three Leading Scientists

Proclaim the Superior Value of

Dr. Price's Baking Powder.

Scientists are devoting closer attention to food products.
Recent examinations of baking powders by Prof. Long, Dr.
Haines, and Prof. Prescott, were made to determine which
powder was the purest, highest in leavening strength, most
efficient in service, and most economical in cost. They
decide that Dr. Price's Cream Baking Powder excels in all
the essentials of an ideal preparation for household use.
They write:—

"Chicago, March 28th, 1894.

We have purchased in the open market cans of Dr. Price's
Cream Baking Powder and also of the other leading brands
of baking powders, and have submitted them to chemical
analysis. We find that Dr. Price's Cream Baking Powder is
a pure cream of tartar powder, that it has a considerably
greater leavening strength than any of the other baking
powders we have ever tested.

PROF. JOHN H. LONG, *Northwestern University, Chicago.*

DR. WALTER S. HAINES, *Rush Medical College, Chicago.*

PROF. ALBERT B. PRESCOTT, *Univ. of Michigan, Ann Arbor."*

that time the word 'tsar,' till then the only name denoting the rulers of Russia, is no longer their official title. In some congress (if I am not mistaken, it was that of Vienna) it had been expressly stipulated that, though the Russian sovereigns had the imperial title, they were not to have the precedence of the Kings of western Europe."—London News.

Rubber Tires for Vehicles.

Experiments recently made in the East with pneumatic tires on road wagons revealed the fact that on a perfectly level wooden floor, pulling in the direction of the strips, steel-tired forty-four-inch and forty-six-inch wheels required less power to move them than did thirty-two-inch and thirty-four-inch pneumatic-tired wheels. When obstructions were placed under the wheels, however, the pneumatic tires quickly proved their easier draft. The tests were then applied out of doors, and under all conditions except on the level floor the pneumatic tires required the least expenditure of power. The experimenter thus sums up his conclusions:

"If the metal-shod wheel meets a gravel stone one-quarter of an inch in diameter, and that stone is resting on a hard foundation, the wheel with its entire load must be lifted bodily one-quarter of an inch high to pass over it, and this takes horse power; but when the rubber tire meets the stone the vehicle is not raised perceptibly, if at all, but the stone is imbedded in the rubber, while most of the weight is borne by that part of the rubber which is still resting on the ground, and the power required to go over it is only that needed to dent the rubber in one spot, or, if it is a pneumatic tire, to slightly compress the body of air which it contains."

This explanation is right as far as it goes, but every man who has ridden a bicycle over a plank road knows that rubber has a particularly clinging affinity for wood and "hugs" it in a very aggravating fashion. Asphalt pavement or a pike road is infinitely easier to ride than a well-made plank or cedar-block road, when the tires are of rubber. The man who don't believe it can learn it to his sorrow, but if he will accept the advice of the writer he will avoid plank roads with his wheel.

Quite a number of the broughams seen at the recent Horse Show in Chicago were rubber-tired, although not pneumatic. Many London cabs use india-rubber tires and Russian vehicles are also equipped with them. Pneumatic tires will answer for light vehicles, such as buggies, phaetons and runabouts, but are hardly adapted to the heavy carriages. Rubber tires of any form are a great luxury.

Sorry He Spoke.

It was on a crowded Sixth avenue train. The atmosphere was stifling, and the passengers resented the arrival of every newcomer as a personal affront. A baby about the middle of the car had been threatening to cry for several minutes and had at last delivered itself of a prolonged howl, followed by a series of nerve-racking screams. All the women looked sympathetic and the men apprehensive. A variety of consolations were suggested. "Poor little dear, undo its hood," said one woman. "Let me take it," said another. "Chuck it out the window!" growled a fat man without a collar, who was fanning himself vigorously with his hat. He said it defiantly enough, but there was such a chorus of feminine indignation that he was glad to get out at the next station. As the train stopped, he fought his way on to the platform and stood puffing and red-faced, while a shrill wailing rent the air, and a chorus of epithets such as "Brute!" and "Beast!" saluted the ears of the astonished people waiting on the platform. The fat man had a guilty, hunted look as he made his way to the street.—New York World.

The Hog That Rides in a Wagon.

Much has been said of the railroad pig Who takes the whole seat for his gripsack big, He is surely a pig to brag on, But nothing's said of the porcine lord Who runs the highway to his own accord,— He's the hog that rides in a wagon.

There's several breeds of this selfish pig, From the nobby hog in a stylish rig To the low-down swine with a "jag on," Don't look for bristles, they may not show; His acts declare him; you'll surely know The hog that rides in a wagon.

Given, a place in a narrow road (He is driving light while you have a load). He will smile like a human dragon While he forces you out of the beaten way Into mire or ditch or slough of clay, This hog that rides in a wagon.

Sees he a strip of country lane, Where a smooth, hard path is the footman's gain, Or a sward one loves to lag on, When he's past there's a rutty mudhole there, Though footmen growl and cyclists swear At the hog that rides in a wagon.

When winter brings snow upon the ground, The hog in his element then is found. You'll know him without a tag on; He calmly crowds you out of the track, He has rights, while you have none, alack! He has changed for a sleigh, his wagon.

If this hog should dump you in the mud And with vengeful fist you should seek his blood, With a face like a brazen flagon He will assume an innocent air; The fault was your own, he'll solemnly swear, This hog that rides in a wagon.

—Will Templer.

Little Deborah's Sunday.

Deborah stood on her tiptoes, putting away the shining pewter teapot in the tall dresser. She had to reach way up, for all she was so tall for a little seven-year-old girl. Sister Abigail was hanging up the dish pan and setting away the crock of soft soap.

It was almost time to get ready for church, and Deborah could hear father backing old Dobbin into the high-backed sleigh. It was three miles to church, and they must start early to get through the drifts.

"Deborah! Deborah! called mother from the buttery, where she was putting up the family lunch. Run upstairs, child, and get your best frock. Abigail will hook it for you and smooth your hair. And, child—the buttery door squeaked on its hinges as mother opened it wider—"spread father's spotted kerchief under your bonnet. I mistrust it will be a blustering day."

Deborah ran away for her dress, and was soon arrayed in it, and warmly bundled in hood and shawl. Mother and Abigail put on their big, quilted, sage-green hoods just as father came in, stamping his cold feet and flapping his elbows.

"It's monstrous cold! You'll need many wraps, mother; and isn't there another stove in the garret somewhere?"

"It's right here, father, all filled with coals," mother said. Her voice sounded muffled in the depths of the quilted hood. "I got it down before breakfast, and Abigail blacked it up real smart lookin'."

The three little stoves were stowed away in the sleigh just where they would keep the "women folk's" cold toes warm. Such funny little stoves they were! Little sheet iron boxes with holes in the cover, set into square wooden frames with handles like the bail of a water pail. The bright, live coals were put into them at home, and would last until the noon recess between sermons, when they would need to be replaced from some good neighbor's fireplace.

Deborah sat down in the buffalo robes in front of the sleigh with father, and mother and Abigail behind on the seat; and away trotted Dobbin over the crunching snow. The bells tinkled in a subdued Sunday way, and the old sleigh tipped and jolted in the badly broken road.

I don't believe Deborah's little great-grandchildren to-day would have known when they got to the meeting-house; for it was only a great, bare building that looked more like a modern barn than a church. No steeple at all! No beautiful porch with wide steps leading up to it! Nothing in the very least

like the church we go to every Sunday! But it looked all right to Deborah. Only she could not help shivering as she thought of the long, long sermon she must listen to with only her little foot-stove to keep her warm. For there was not a bit of a stove in Deborah's meeting-house. Everybody sat on the straight-backed seats, with their feet on the little boxes of coals, and maybe tried to believe they were warm.

Deborah's little great-grandchildren would have wondered even more if they could have followed their small great-grandmother into the church. She pews were square boxes with doors opening into them, and little open rails running along the top of the sides. Deborah's head just came up to the rails as she walked sedately up the aisle.

Father swung open the door to his pew, and the family stepped in. Oh, such queer seats! They ran all around the box up to the door. Some of them faced the preacher, and some were sideways and some, like Deborah's own particular seat, were squarely back to the minister. There were even little queer "cornering" seats in some of the boxes.

Deborah sat down on her uncushioned, high-backed little bench. She had to hitch herself up on it, it was so high; and, when she was all seated, and her little footstove put under it, her toes had to stretch themselves uncomfortably to reach the warmth.

She turned her head now and then, and peeped through the railing up to the minister; but it made her neck ache to look up so high. For the minister stood way, way up, almost to the ceiling in a great, tall pulpit that seemed to hang right in the air, almost. Up over the preacher's head was a large "sounding-board," like an enormous umbrella spread out; and down under the pulpit sat three solemn deacons in a row.

That was the "deacon's seat," and Deborah used to watch dear old Deacon Twombly at one end. She knew just about when he would spread his blue cotton kerchief over his head and go to sleep. And then she used to listen for his mild little snores between the preacher's slow words. It helped out the time a great deal.

How Deborah's back did ache, and how numb her little hands were before the long sermon ended! How glad she was—though she tried not to be—when at last they all stood up, and old Mr. Bial Davis tuned his bass-viol, and the choir sang!

Then the people went slowly out. Deborah's "folks" went over to Mercy Merriweather's to get fresh coals for the footstoves, and good Mrs. Merriweather insisted upon their eating their lunch over there in the warm kitchen. The afternoon was just like the morning, only little Deborah's legs grew stiffer and her neck ached harder.

It was almost early candle-light when old Dobbin ambled up to the kitchen door. Deborah was hungry enough to enjoy mother's good supper, and tired enough to go to bed right after it.

How different it was from the little great-grandchildren's Sunday! You see, I know, because Deborah—quaint, sweet little Deborah—was my grandmother, too!—Youth's Companion.

BEDLOE HOGSWOG of Upper Sandusky, Ohio, is the owner of a mule which has been taught to keep the flies off the baby by wagging its ears over the cradle. The sagacious creature also pumps water from the well, carries in wood for the fire, and is now learning to turn the wringing machine at the washtub.

DOMESTIC ECONOMY.

ROAST TURKEY STUFFED.—Clean and prepare a medium-sized turkey for roasting. Cut two onions in pieces and put them in a saucepan with two ounces of lard and color them lightly. Soak a pound of bread in water, from which press the water; add the bread to your onions, with the turkey's liver and heart chopped very fine, a little salt, two pinches of pepper, the same of sage, a pinch of thyme, and mix all well together. Stuff the inside of the turkey with this mixture, sew up the opening through which you have introduced the stuffing, and put it to roast with a little butter on top. Roast for three hours, strain the liquid in your pan, pour it over the turkey and serve.

TURKEY WITH TRUFFLES.—Clean and prepare a young, medium-sized turkey. Melt four ounces of the fat of the turkey in a frying pan, with a shallot and a few truffles chopped fine, a pinch of thyme, salt, pepper and nutmeg, a pound of sausage meat and a can of truffles cut in quarters. Mix all well together, and with this mixture stuff the turkey, sewing up the opening. Roast the turkey for three hours, putting a little butter on the breast and a glass of white wine in the pan, basting it often. Serve the turkey with the liquid in the pan, strained, poured over it.

FRUIT OR CHRISTMAS PLUM CAKES.—Take two pounds of flour dried in the oven, one-half pound of sugar finely powdered, four yolks of eggs, two of whites, one-half pound of butter washed with rosewater, six spoonfuls of cream, warmed, a pound and one-half of currants, washed, and mix all well together. Make them into small cakes; bake them in an oven almost as hot as for a manchet, and let them stand half an hour until they are colored on both sides; then take down the oven door and let them stand to soak. You must rub the butter in the flour very well, then add the eggs and cream, and then the fruit.

Pith and Point.

To have to hoe the same row every day soon takes the poetry out of life.—Ram's Horn.

Women have more good sense than men. They have fewer pretensions, are less implicated in theories, and judge of objects more from their immediate and involuntary impressions on the mind, and therefore more truly and naturally.—Hazlitt.

"Young man," said the prosperous old gentleman who had sold his pork, "you say you hain't had a square meal for a week?" "I have not, sir." "And you've seen better days?" "I have." "Used to move in good society?" "Yes, sir." "Then come along with me to a first-class eatin' house and I'll pay for some quail on toast. I want to learn the correct way to eat the blamed dish."—Chicago Tribune.

"I love all that is beautiful in nature and art," she was saying to her æsthetic admirer. "I revel in the green fields, the babbling brooks and the little wayside flowers. I feast on the beauties of earth and sky and air. They are my daily life and food, and—" "Maudie," cried out her mother from the kitchen, not knowing that her daughter's beau was in the parlor. "Maudie, whatever made you go and eat that big dish of cabbage and pork that was left over from dinner? I told you we wanted them warmed up for supper. I declare if your appetite isn't enough to bankrupt your pa." And she collapsed.—N. O. Picayune.

Highest of all in Leavening Power.—Latest U. S. Gov't Report

Royal Baking Powder
ABSOLUTELY PURE

Horse Clipping.

Clipping of horses is a growing practice and bids fair to extend considerably beyond the class of horses upon which it was first practiced. Dr. I. S. Cattanch, veterinary surgeon of New York, in an interview with a New York Herald reporter, expresses himself as follows: "I am an advocate of clipping horses in the winter, and am convinced they are benefited by it more than the majority of owners imagine. They thrive much better in consequence, and become fatter; they do not break out in a profuse perspiration after being driven moderately, and, in fact, they are better in every way by getting rid of the heavy and superfluous coat. On the contrary, the unclipped horse that is driven fast will fall away in flesh, and not show the ambition of a clipped animal. This may be accounted for by the night sweat they frequently have, which should always be prevented. The late and much lamented Mr. Bergh, many years ago, stated that clipping does not hurt; it is of the greatest service to a horse. A horse with a long coat that has been returned to the stable in a heated condition, is liable to remain in a sweaty state all night, the hair becoming cold and clammy on account of cold night air and draughts, and frequently lays the foundation for pneumonia, pleurisy, or other kindred diseases. All horses should be clipped at least three times—fall, winter and spring. After a drive a horse should be rubbed thoroughly until perfectly dry. It invigorates and produces a healthy condition of the body.

On the same subject we find the following in the London Live Stock Journal: The advantages of clipping horses in winter are many. Notwithstanding that some object to removing the horse's coat in cold weather, as interfering with the laws of nature, there are sound physiological reasons for the practice. Experience is also in its favor—many practical men maintaining that to clip a horse is equivalent to giving him an extra feed of corn a day. The fetlock and hair behind the pasterns should not be removed if we desire to avoid cracked heels—otherwise chilblains. The hair should be left on, which from its non-conducting properties will keep that part of the limb warm which is so sensitive to chills. Of course, fashion objects to leaving the pastern and fetlock clothed, in high-bred riding and carriage horses in the West End. The ordinary hunter, however, should be treated as indicated, and he will be all the better for being unclipped from above the knee downwards. Hair left on the legs of hunters is a protection against thorns and inflammation of the skin. Cart horses are better left with hair on from the coronet to some little distance above the knee joint.

White House Horses Docked.

A recent dispatch from Washington, D. C. says: All of the horses in the Presidential stables here have their tails docked. The discovery of the fact has caused some excitement among the class of persons who deprecate such a radical departure from the long-tailed fashion that has prevailed among the White House horses since the days of Thomas Jefferson. It has always been regarded as essential to the rule of humanity and dignity that the President should ride behind horses with flowing manes and tails, and the persons who are responsible for the present concession to fashion will, no doubt, be severely criticised.

During President Grant's second administration the docking of horses' tails was considered the proper thing among those who set the "court" styles, and a persistent attempt was made to obtain Gen. Grant's consent to the abbreviation of the tails of his favorite roadster, "Cincinnati," and the other fine horses in his stable. The General, however, regarded docking as cruel and the long, flowing tail as a thing of beauty, and he refused to be persuaded. The local society for the prevention of cruelty to animals thereupon passed appropriate resolutions commending

the President for his humane sentiments. It is intimated that President Cleveland was also opposed to the docking operation that has just taken place, but that he was overruled by those whose desires he is in duty bound to respect.

\$100 Reward, \$100.

The reader of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly on the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials. Address, F. J. CLENEY & CO., Toledo, O. Sold by Druggists, 75c.

State Veterinary Surgeons.

The California State Veterinary Association held its annual meeting recently in this city. The following were present: Drs. Thomas Maclay, Petaluma; H. A. Spence, San Jose; W. A. Wadhams, Santa Clara; C. B. Orvis, Stockton; D. F. Fox, Sacramento; R. A. Archibald, Sacramento; F. E. Pierce, Oakland; A. Robin, San Francisco; H. Fabri, San Francisco; H. A. Forrest, Santa Cruz; A. S. Williams, Marysville; J. Graham, Fresno; J. H. Eddy, Stockton; J. W. O'Rourke, Stockton.

The following officers were elected: President, C. B. Orvis, Stockton; R. T. Whittlesey, Los Angeles; secretary, R. A. Archibald, Sacramento; treasurer, D. F. Fox, Sacramento; Board of Examiners—Drs. Maclay, Egan, Spence, Lemke and Graham. The association will meet next year at San Jose.

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75-Cent Teas,

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A very pretty Decorated Breakfast Set of 18 pcs.
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Great American Importing Tea Company,
52 to 58 Market St., San Francisco.

5/A HORSE BLANKETS
ARE THE STRONGEST.
Made in 250 Styles.
For either road or stable use.
All shapes, sizes and qualities.
WM. AYRES & SONS, PHILADA.

ANNUAL MEETING.

The regular annual meeting of the stockholders of the GRANGERS' BANK OF CALIFORNIA, for the election of Directors for the ensuing year, will take place at the office of the Bank, in the city of San Francisco, State of California, on TUESDAY, the 8th day of January, 1895, at 1 o'clock P. M. ALBERT MONTPELLIER, Cashier and Manager. San Francisco, December 4th, 1894.

WANTED!
Position as Manager on a Large Farm. Thorough acquaintance with Stock Raising, Dairy Business, General Farming. Experience in foreign countries; French, English, German correspond. enee; Bookkeeping; Graduate of Agricultural Academy in Germany. P. O. box 1835, Bakersfield, Kern County, Cal.

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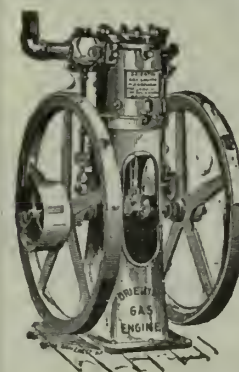
INCORPORATED... APRIL, 1874



Capital Paid Up... \$1,000,000
Reserve Fund and Undivided Profits, 130,000
Dividends Paid to Stockholders... 832,000

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IS THE BEST because it combines simplicity of construction with power and economy of space. It can be run with natural or manufactured gas or gasoline at a cost of 25 to 35 cents per horse power per day. It can be used for pumping purposes, as well as for all purposes where a perfect engine is required, with the advantage of lessening the risk of explosion. No licensed engineer at a high salary needed to operate it. Send for circulars and prices if a good safe engine is what you need.

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This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

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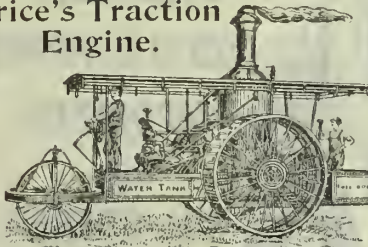
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IT WILL CONTROL THE MOST VICIOUS HORSE.

75,000 sold in 1891.

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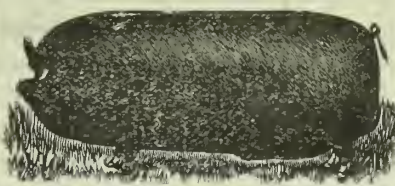
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We have a few Choice Pigs for sale.

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Recommended by Goldsmith, Marvin, Gamble, Wells, Fargo & Co., etc., etc. It keeps Horses and Cattle healthy. For milk cows; it increases and enriches their milk. **Manhattan Food Co.**, San Mateo, Cal.

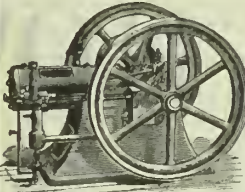
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Simplest and most economical engines on earth.

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Requires only a few minutes' attention a day. Guaranteed cost of running, 1 cent per hour per H. P.

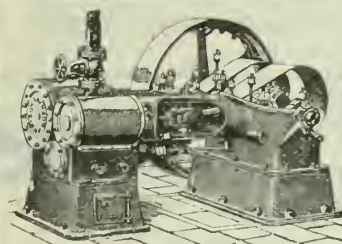


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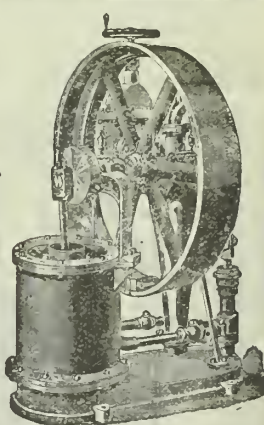
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Gilman's Patent Tule Tree Protector.

PATENTED AUGUST 1, 1893.



FIRST PRIZE—Medal and Diploma—California Mid-Winter International Exposition. Cheapest, best and only one to protect trees and vines from frost, sunburn, rabbits, squirrels, borers and other tree pests. For testimonials from parties who are using them, send for descriptive circulars.

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Meat Chopper

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Sausage Meat,

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For Sale by the

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Farm and Fireside says: "It is the only Meat Chopper we ever saw that we would give house room. It has proven such a very useful machine that we want our readers to enjoy its benefits with us."

Guaranteed to CHOP, Not GRIND the Meat.

American Agriculturist says: "We have given this Meat Chopper a thorough trial with most satisfactory results. They excel anything of the kind made in either hemisphere."

A FEW WORDS

Many different makes of chilled plows have been brought out in this State, most of which are now entirely out of the market, having each enjoyed a brief sale, but finally succumbing to the superior qualities of the OLIVER. The unlucky purchaser of a plow now out of market is unable to procure extras of any kind, and his plow is practically useless—a veritable "ship without a rudder," and suitable only for barn-yard ornamentation. He is obliged to throw it aside and pocket a loss. It will be wise economy for you to avoid such an experience.

When about to purchase a plow weigh every fact well. Remember that the OLIVER has been here for years and has come to stay. The fortunate possessor of an Oliver Plow has no difficulty to contend with in the matter of extras, as we constantly carry in stock a complete line of perfect fitting duplicate parts. These are easily and quickly procured and adjusted and the work but slightly delayed, which is of itself a strong recommendation to the reflecting purchaser. You can make no mistake in buying the Genuine Oliver Plows and Extras.

ABOUT PLOWS.

OLIVER'S

CHILLED PLOWS,
STEEL PLOWS,
COMBINATION PLOWS,
HILLSIDE PLOWS,
SULKY PLOWS,
GANG PLOWS,

Constitute the Best and Most Reliable Line of Plows ever offered to Farmers anywhere.

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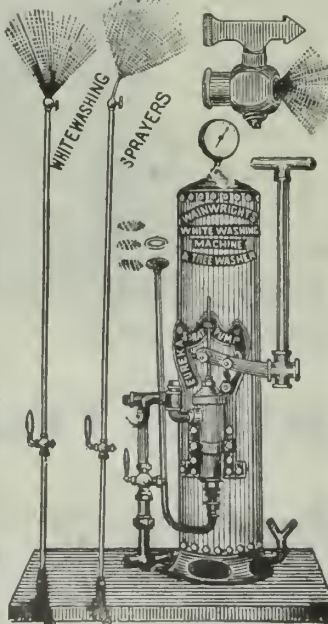
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Will spray 200 trees per hour. Contracts taken for large jobs of tree spraying or whitewashing. Send for Catalogue. 14 HAYES ST., S. F.



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Entirely of Steel. No castings to break. Strongest and simplest Lever Arrangement on the market. Write for descriptive Circular. **RODERICK LEAN MFG. CO.** No. 14 Park St., MANSFIELD, O.

HANG YOUR DOOR


WITH STANLEY'S Corrugated Steel Hinges. They are Stronger, Handsomer and cost no more than the old style. For sale by Hardware Dealers generally, but if not in your vicinity write the Manufacturers. Send for "Biography of a Yankee Hinge," mailed free.

THE STANLEY WORKS, New Britain, Ct.

STUMP PULLERS
HOOKER & CO.
16 & 18 DRUMM ST. S.F.

A DEAD SHOT with absolutely NO ESCAPE
Light, Simple and Cheap.

WHEELER'S CARBON BISULPHIDE VAPORIZER
(PATENT APPLIED FOR)
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A AIR CHAMBER OF GALVANIZED IRON OPEN AT TOP ONLY
B PISTON FOR DRIVING AIR UNDER THE LIQUID C, B, AT C
D OPEN INVERTED CAN OR CUP
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Makes Bisulphide Effective and Economical. No more waste of material or labor. Through the protection afforded by this tool, you may now grow alfalfa on the uplands, preserve your lawn and flowers in the front yard, potatoes in the garden, and trees in your orchard.
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(SUCCESSORS TO THOMSON & EVANS.)
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U. S. STANDARD. FULLY WARRANTED.
Delivered at your R. R. Station and ample time on building and testing allowed before acceptance.
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PORTABLE - PLATFORM - SCALES, TRUCKS, ETC.
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LARGEST
All kinds of tools. Fortune for the driller by using our Adamantine process, can take a core. Perfected Economical Artesian Pumping Rigs to work by Steam, Air, etc. Let us help you. **THE AMERICAN WELL WORKS, Aurora, Ill.; Chicago, Ill.; Dallas, Tex.**

S. F. MARKET REPORT.

Market Review.

WHEAT—The new year opens with softer tone to the market. Receipts continue to come along freely from the north, over 28,000 centals arriving to-day from Oregon and Washington. Shippers are not disposed to pay over 85¢ per cwt for standard shipping quality, while 86½¢ is a full figure for a choice article. Milling Wheat is held at old quotations, say 92½¢@97½¢ per cwt. Walla Walla wheat is quotable at 76¼¢@78¼¢ for fair average quality, 82¼¢@85¢ for blue-stem and 70¢@75¢ per cwt for damp stock.

BARLEY—Quotations remain in stationary condition, there being comparatively no business doing at the present. Offerings are liberal and values have easy tendency. Some improvement in trade is looked for, but it would require a very pronounced demand to give much buoyancy to prices. We quote: Feed, fair to good, 78¼¢@81¼¢; choice, 82¼¢; Brewing, 90¢@95¢ per cwt.

OATS—The demand has been quite slim of late, but better inquiry is expected now that the new year is entered. It will probably take a few days to wear off the holiday character of things, when dealers look for some impetus to be given to the market by a renewal of active trading. We quote: Milling, 1¢@1 12½¢; Surprise, 1¢ 05¢@1 15¢; fancy feed, 1¢ 02½¢@1 07½¢; good to choice, 92½¢@97½¢; poor to fair, 87½¢@90¢; Black, 1¢ 15¢@1 30¢; Red, 1¢ 07½¢@1 15¢; Gray, 92½¢@1 15¢ per cwt.

CORN—The market is amply furnished for all ordinary requirements. Trade slow. Damp stock sells below quoted figures. Quotable at 1¢ 10¢@1 15¢ per cwt. for large Yellow, 1¢ 20¢@1 25¢ for small Yellow, and 1¢ 17½¢@1 25¢ for White.

FEED—Manhattan Horse Food (Red Ball Brand) in 100-lb casks, 88¢; Manhattan Egg Food, 100-lb bags, 11¢ 50¢.

SEEDS—We quote as follows: Mustard, Brown, 1¢ 75¢@2¢; Yellow, 82¢@2 45¢; Trileste, 82¢@2 35¢; Canary, 36¢@4¢; Hemp, 3¢@4 4¢; Rape, 1¢@2 4¢; Timothy, 5¢@6 5¢; Alfalfa, California, 7¢@8¢; do, Utah, 8¢; Flax, 82¢@2 25¢ per cwt.

HAY—Demand rather light. Wire-bound Hay sells at 1¢ per ton less than rope-bound Hay. Following are the wholesale city prices for rope-bound Hay: Wheat, 89¢@91¢; Wheat and Oat, 88¢@91¢; Alfalfa, 87¢@90¢; Barley, 86¢@90¢; Clover, 85¢@90¢; compressed, 89¢@92¢; Stock, 88¢@90¢ per ton.

STRAW—Quotable at 60¢@75¢ per bale.

HOPS—The inquiry is almost nominal. Choice stock is in light offering, but common qualities are in fair supply. Quotable at 5¢ to 7½¢ per lb.

BRAN—Large receipts to-day, nearly 6,000 sks. arriving from Oregon. Quotable at 11¢@12¢ per ton.

RYE—Quotable at 92½¢@95¢ per cwt.

BUCKWHEAT—Quotable at 90¢@91¢ per cwt.

POTATOES—Receipts show no diminution. Prices remain easy. Volunteer New Potatoes, 2¢ per lb; Early Rose, 35¢@50¢; River Reds, 30¢@35¢; Burbanks, 35¢@40¢; Oregon Burbanks, 50¢@75¢; Salinas Burbanks, 75¢@81¢; Sweets, 50¢@75¢ per cwt.

ONIONS—In fair demand at easy rates. Quotable at 50¢@70¢ per cwt.

BEANS—Trade is of quiet order. Really good stocks of all kinds is somewhat firmly held, but liberal concessions are obtainable on wet and damaged stock. We quote as follows: Bayos, 1¢ 75¢@1 90¢; Butter, 1¢ 75¢@1 85¢ for small and 1¢ 90¢@2¢ for large; Pink, 1¢ 10¢@1 35¢; Red, 1¢ 00¢@1 75¢; Lima, 84¢@1 04¢; do, 82¢@2 50¢; Small White, 82¢@1 02¢; do, 82¢@1 04¢; Blackeye, 83¢@2 25¢; Red Kidney, 82¢@83¢; Horse, 1¢ 50¢@1 60¢ per cwt.

VEGETABLES—Trade slow. Sacramento Asparagus, 10¢@15¢ per lb; San Leandro Rhubarb, 50¢@75¢ per box; Mushrooms, 50¢ per lb. for common and 10¢@15¢ per lb. for choice; Los Angeles Tomatoes, 1¢@1 25¢ per box; String Beans, 5¢ per lb. for poor and 10¢@12½¢ per lb. for good stock; Rhubarb, 75¢ per box; Green Peas, 60¢ per lb; Marrowfat Squash, 85¢@90¢ per ton; Hubbard Squash, 88¢@10¢; Green Peppers, 40¢ per lb; Turnips, 75¢ per cwt; Beets, 75¢ per sack; Parsnips, 1¢ 25¢ per cwt; Carrots, feed, 35¢@40¢; Cabbage, 50¢@55¢; Garlic, 3¢@4¢ per lb; Cauliflower, 60¢@70¢ per dozen; Dry Peppers, 15¢@17½¢ per lb; Dry Okra, 12½¢@15¢ per lb.

FRESH FRUIT—Apples are cheaper, offerings being large. We quote as follows: Persimmons, 25¢@50¢ per box; Apples, 35¢@51¢ per box; Pears, 50¢@75¢ per box.

CITRUS FRUITS—The first auction sale of Oranges this season occurred to-day. We quote: California Navels, 82¢@2 50¢; Seedlings, 1¢@1 50¢ per box; Sonora Oranges, 1¢ 50¢@1 75¢ per box; Mexican Limes, 83¢@4 50¢ per box; California Limes, in small boxes, 50¢@75¢ per box; Lemons, Sicily, 84¢@85¢; California Lemons, 82¢@2 50¢ for common and 88¢@4 for good to choice; Bananas, 1¢@2¢ per bunch; Pineapples, 84¢@6¢ per dozen.

DRIED FRUIT—The market continues quiet, and will probably keep so all this month. Stocks are not particularly heavy, and dealers expect trade enough to clean up in comfortable fashion in time for next season.

Following are the prices furnished by the Fruit Exchange:

Apricots—Fancy Moorpark, 8½¢; choice, do, 8¢; fancy, 7½¢; choice, 7¢; standard, 6½¢; prime, 6¢. Apples—Evaporated, 5½¢@7¢; sun-dried, 4¢@5¢. Peaches—Fancy, 6½¢; choice, 6¢; standard, 5½¢; prime, 5¼¢; peeled, in boxes, 12¢@13¢. Pears—Fancy, halves, 5½¢; quarters, 4½¢; choice, 4¼¢; standard, 3½¢; prime, 3¢. Plums—Plitted, 4¢@5¢; unplitted, 1½¢@2¢. Prunes—Four sizes, 4¼¢@4½¢.

Nectarines—Fancy, 7¢; choice, 6½¢; standard, 6¢; prime, 5½¢. Figs—White, choice, 5¢@5¼¢; Black, choice, 1½¢@2¢.

Raisins—4-crown, loose, 4¢ per lb. in 5-lb. boxes; 3-crown, 2½¢; 2-crown, 2¢; seedless Sultanias, 3¢; seedless Muscatels, 2¢ per lb; 3-crown London Layers, 1¢ 25¢ per box in 20-lb. boxes; clusters, 1¢ 50¢; Delhessa clusters, 82¢; Imperial clusters, 83¢; 4-crown, loose, 1¢ 15¢; 4-crown, loose, faced, 1¢ 25¢ per box. Dried Grapes—1½¢ per lb.

BUTTER—The new year opened without any marked change in the situation. Supplies of choice quality are moderate and prices keep steady for such goods, while common stock is plentiful and easy. Fancy creamery, 23¢@25¢; fancy dairy, 19¢@21¢; good to choice, 15¢@18¢; store lots, 13¢@14¢; pickled roll, nominal; Arkin, 15¢@16¢ per lb.

CHEESE—We quote: Choice to fancy, 9¢@11¢; fair to good, 7¢@8¢; Eastern, ordinary to fine, 12½¢@14¢ per lb.

EGGS—The market is not overstocked, but dealers look for increased receipts, and an easier feeling prevails in consequence. We quote: California Ranch, 34¢@36¢, with a small advance occasionally for something fancy; store lots, 27½¢@32¼¢; Eastern Eggs, 22¢@24¢ per dozen for cold storage and 25¢@26¢ for fresh.

POULTRY—Now that the holidays are over, the market shows softer tone. A carload of Eastern sold this morning at \$6.60 for Heus, \$5 for old Roosters, and \$6.50 for young Roosters. Turkeys brought \$1 apiece. California stock is quotable as follows: Live Turkeys—Gobblers, 11¢@13¢; Hens, 11¢@13¢ per lb; dressed Turkeys, 12¢@15¢ per lb; Roosters, 14¢@15¢ for old, and \$5.00 for young; Broilers, 34¢@45¢ for small and \$4.50 for large; Fryers, 85¢@50¢; Hens, 85¢@60¢; Ducks, 85¢@60¢; Geese, \$1.50@2¢ per pair; Pigeons, \$1.00@1.50 per dozen.

Patrons of Husbandry.

A Lull in the Revival Effort.

The meeting of the Executive Committee appointed for last week took place on Thursday at the RURAL PRESS office, all the members but Mr. Jones of San Jose being present. The whole day was spent in going over plans of revival work, but no result was reached, final action being postponed to a meeting appointed for the 11th and 12th of January, to occur at Sacramento. At the same time and place a meeting of the Legislative Committee of the State Grange is to be held and a plan outlined for urging the legislative work authorized at the Stockton meeting. The members of the Legislative Committee are Thos. McConnell, J. D. Huffman and Senator Johnson, and all are expected to be on hand at Sacramento on the 11th and 12th.

This lull in the movement for a general grange revival, while unfortunate, need not be fatal to the plan, for it may be the means of bringing out some new and better scheme of work. The situation, however, is critical and the sooner active operations are begun the easier it will be to get the members and friends of the order interested.

Give and Take.

SACRAMENTO, Jan. 1st, 1895.

TO THE EDITOR:—I see that the grangers do not respond to the strong hints and invitations you threw out a short time ago, to write and give items and ideas to their grange paper. I want to get the patrons to look at it from a purely selfish view or standpoint, which I believe I can; then, that accomplished, I believe we will get the correspondence and ideas as fast as we can digest them.

In the first place let us act in a reciprocal manner—give as well as take. In the second place I want to show that this is the cheapest and quickest way to receive and impart information, ideas, suggestions and corrections, besides acquiring the faculty of imparting information on paper. Now we can do our part for about three cents and Uncle Sam will do his for two cents, so you see the cost will not exceed five cents. It is well worth five cents to any one who has a respectable name to see it in print, until we gain notoriety enough to be placed on the pay list. How much cheaper it is thus to relieve your head of a pressure of ideas, than take horse and buggy and travel over the country and deal out in single doses.

What a gratification it will be to see, in imagination, the head of some household reading your article to his family and friends, commenting, approving and discussing its contents—not only one family, but hundreds and thousands; not in our land only, but in other nations and climes. I frequently see mentioned that the RURAL PRESS makes its appearance in some far-off place where I little suspected that it was known. Do you realize this, my brother granger, that by the expenditure of five cents and a little part of your time you have set to work an entire new train of thought? These new thoughts, if persistently followed, will bring back to you a hundred fold in the currency of gratification, intelligence and prosperity.

You may say, "I have not got the ideas to write about." Do you ever expect to have them if your ideas and thoughts never arise above the horizon but three times a day—sunrise, high noon and sundown? Do not let a day pass over your head without gaining and retaining a new idea.

When I was traveling in an official capacity a few years ago for the

(Continued on page 14.)

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING DECEMBER 18, 1894.

531,099.—CAR COUPLING—J. Clark, Hartland, Wash.
531,022.—DISPLAY RACK—W. H. Courad, Pasadena, Cal.
530,987.—INDEX—J. A. Fischer, S. F.
531,172.—HARNES—W. A. Fleming, S. F.
531,178.—HARP LOCK—F. A. Getze, Los Angeles, Cal.
531,045.—LAVATORY APPARATUS—D. Ketas, Seattle, Wash.
531,003.—TRUNK—K. S. O'Keefe, S. F.
531,059.—SEWING MACHINE—F. O'Neill, Redlands, Cal.
531,132.—MAGAZINE GUN—W. H. Ostrander, S. F.
531,005.—ELECTRIC CONVERTER—F. C. Priestly, S. F.
531,006.—DYNAMOMETER—R. J. Rolfson, S. F.
531,134.—FIRE-PROOF BUILDING—J. W. Rowell, S. F.
531,068.—ORE CRUSHER—A. H. Schierholz, S. F.
531,231.—FARE REGISTER—E. T. Taylor, Oakland, Cal.
531,232.—SUSPENSORY—John Teuscher, Jr., Bridal Veil, Or.
531,074.—CENTRIFUGAL PUMP—M. Wagner, Tacoma, Wash.

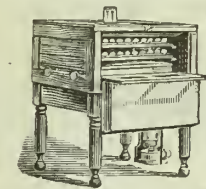
NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

DIVIDEND NOTICE.

THE GERMAN SAVINGS AND LOAN SOCIETY,

526 California Street.

For the half year ending December 31, 1894, a dividend has been declared at the rate of five (5) per cent per annum on Term Deposits and four and one-sixth (4 1/6) per cent per annum on Ordinary Deposits, payable on and after WEDNESDAY, January 2d, 1895. GEO. TOURNY, Secretary.



SUCCESSFUL INCUBATOR
A catalogue giving full information regarding artificial hatching and brooding, also a treatise on poultry raising sent FREE. Write now to Des Moines Incubator Co. Box 17 DES MOINES, IA.

CATALOGUE FREE. SEND FOR IT.

WHITE LEGHORNS EXCLUSIVELY
WEST RIVERSIDE, CALIFORNIA
Le Grand Poultry Ranch
The Greatest Egg Producers and Money Makers
Send for New Catalogue
EGGS FOR MATCHING

THE ONLY FOWL FOR THE FARMER.

TREE - WASH.

Olive Dip.

"Greenbank" Powdered Caustic Soda and Pure Potash.

T. W. JACKSON & CO.

Sole Agents. - - No. 226 Market Street SAN FRANCISCO, CAL.

WAGON AND PLATFORM SCALES

HOOKER & CO. 16-18 DRUMM STREET, S. F.

FAT FOLKS

using "ANTI-CORPULENE PILLS" lose 15 lbs. 8 months. Cause no sickness, contain no poison and never fail. Sold by Druggists everywhere or sent by mail. Particulars (sealed) 4c. WILCOX SPECIFIC CO. Phila. Pa.

PILES.

BICURA TREATMENT CURES THEM Sent postpaid for 60c. BICURA CO., 310 California San Francisco.

WANTED—TO RENT OR BUY IMPROVED FARM

Of forty or eighty acres near the coast. Send description and price to C. KRUGER, Pfeiffer, Kansas.

WORK HORSE WANTED

In exchange for Almond or French Prune Trees, one year old. R. J. STEVES, Box 853, San Jose, Cal.

J. K. ARMSBY COMPANY.

CHICAGO.....SAN FRANCISCO
BOSTON.....LOS ANGELES

Largest Handlers of Dried Fruits.

If you have a parcel to offer, submit samples to us.
We are the principal handlers.

MOORE, FERGUSON & CO
WOOL, GRAIN, FLOUR* General Commission Merchants, *
310 CALIFORNIA ST., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

Krogh Mfg. Co.

—Manufacturers of—

Triple Acting Pumps, Centrifugal Pumps,
Steam Pumps, Deep-Well Pumps,
Wind Mills, Horse Powers, Wine Machinery.

Link-Belt Elevators and Conveyors,
Link-Chain and Sprocket Wheels.

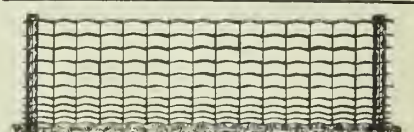
51 Beale Street, San Francisco.

BLAKE, MOFFITT & TOWNE,

..... DEALERS IN.....

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512 to 516 Sacramento St., San Francisco, Cal.

BLAKE, MOFFITT & TOWNE... Los Angeles
BLAKE, McFALL & CO..... Portland, Or.

SLOW BUT SURE.

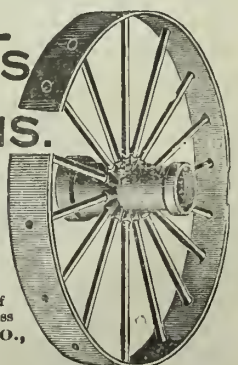
In these days of rapid transit, 2½ miles per hour would be called slow, but if the traveler was making as he went along, the most perfect, complete, self-regulating wire fence ever heard of, it would alter the case. Our factory, with its increased capacity, will turn out that amount per hour, and as we run 24 hours per day in the spring, 64 miles will be the daily product. The demand always keeps up with the supply.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

METAL WHEELS

for your
WAGONS.

Any size you want, 20 to 55 in high. Tires 1 to 8 in wide—hubs to fit any axle. Saves countless many times in a season to have set of low wheels to fit your wagon for hauling grain, fodder, manure, etc. No resetting of tires. Cat's free. Address
EMPIRE MFG. CO., Quincy, Ill.



Ready-Made Success

That's what the **PLANET JR. Labor Saving Farm Tools** represent for the farmer—an end to plodding—a beginning of better results. The **PLANET JR. Book** for 1895 gives you an introduction to 20 of these marvelous machines. Explains their many uses and advantages in detail; shows you how to turn the tide of fortune *your way*. Many a farmer dates the beginning of his success by the reading of this book. We send it **Free**. Will you make a beginning?
S. L. ALLEN & CO., 1107 Market St., Philada.

Give and Take.

(Continued from page 13.)

grange, I tried to get a new idea every day. I struck a field one day where the grass was exceedingly short, the new things very scarce, and I was about to write it down as a blank. Where we stopped for the night was a narrow gate leading into the front yard, and as we passed through I said to my companion, "There is the new idea that I have been looking for all day." For the hinges of this gate they had cut the tops off a pair of heavy miners' boots and put both posts through the legs. A new use for top boots—nothing very brilliant about it, but a new idea to me.

Always travel with eyes and ears open; and if you do not want the observation for your own use you can help a friend out some time when he is in a tight place.

If some of the grangers do not respond, I will try to find their tender spot and hit them on the raw. I will do worse than that. I will speak right out in meeting and call on John Smith and Sam Jones. Let each say to himself the other fellow has an idea, and now let us entice it from him, hold out some irresistible bait. One good original idea is worth a dozen second-handed ones. I hardly ever go on a farm but what I see a new idea, although it may be in a crude form. Grangers, do not let your experience and ideas die and be buried with you, with the expectation that they will petrify and be dug up by future generations, like our forest trees.

It will soon be time to plant and sow. What will you plant? What sow? See what trees are adapted to your soil and climate. Do not spend ten years in experimenting when by observation and inquiry it can be found out in advance. How will you prune this year? What kind of shade trees, and distance apart? If you are a little despondent and brooding over the financial failure of your adventure for the last season, think of some of your neighbors that are not as well situated as yourself, and extend to them mental if not substantial sympathy. DANIEL FLINT.

Secretary's Column.

Before this issue of the RURAL reaches its readers the old year will have gone and a new year arrived, and with the figures 1895 in view this office wishes you one and all a happy and prosperous New Year.

May the progress of grange work this year come to our Golden State with the same interest and with more members and granges than fell to the lot of our New England sisters during the year 1894, and may their ranks be increased a hundredfold. And while my wishes may be well and the Grange spirit of many of the older heads of the order in accord, What is it that has caused this dormancy on the Pacific slope? It is not the financial depression that has been upon us, nor the political crisis which we have just passed through. The report of the Worthy Treasurer of the National Grange shows conclusively that that body—the national organization, the head of this order—is in an excellent condition, the permanent fund amounting to about \$60,000. The current income the past year amounted to \$20,768.93, and the expenses up to the close of the year, October 1st, amounted to \$6,328.16, leaving a balance in the treasury at that time of \$14,440.17. Truly this is not a bad showing after having gone through a year of financial failures as reported from all over the land.

The question that presents itself to-day for consideration in this State is, How can we promote a healthy grange advancement, not a mushroom growth but one that will constantly attract our influential farmers, their sons and daughters, to our ranks? As far as the principles of the order are concerned, there are none better, and as a matter of fact there is but one national farmers' organization in existence to-day, and that is the grange. It is now in its 29th year; its objects are mainly

educational and it is strictly non-partisan and non-sectarian. It is one of the well known conservative civic societies that is looked upon with respect by all who have observed its methods and noted its results, as we have in this State where there are subordinate branches of it that have been in existence for more than twenty years. At its recent annual meeting in Springfield thirty States were represented and over 300 members in attendance. And as to the question just proposed, I find by reference to reports of some sixteen years ago that we had many more granges, spread over more counties in this State, paying in dues and fees a sum much larger than at the present time. Although this was accomplished at the time of the grange boom, yet those results I believe to be largely due to the fact that field workers went out everywhere and pressed the work of organization. We stand to-day in a better position to push the work than ever before, because of the solidity and permanency of our order.

Let us again return to our former plans of flooding the country with competent speakers and organizers, paying them liberally for their services, confidently believing that the increase in fees and dues will cover all extra expense and add not only members but great strength. Send out men and women who can devote their entire time to the work. Let them work in connection with our deputies.

These should be continued as the strong right arm of the field workers and encouraged to enter every open door, and at the same time search for other doors to open. Follow up with open meetings at least once each quarter, with Farmers' Institutes always under the auspices of the local or Pomona grange.

Invite every farmer, his wife, his sons and daughters to be present. Let all matters of interest to the grange and farmers generally be thoroughly discussed, giving attention to the social feature. Let our neighbors know our plans, objects and aims and I believe a large increase in members would be the result.

Grange literature ought to be sown throughout our borders.

Our members should be constantly in contact with all kinds of books and papers that will enlighten them in their varied daily pursuits.

Co-operation is undoubtedly the most important question before the grange and the most difficult to bring to a satisfactory conclusion.

While the social features of the order are very pleasant, we must remember that the railroad men, the sugar trust, the insurance combination, and the whisky ring, and all the other great corporations don't hold conventions for the special reason that they want to improve their minds, but that they may form powerful combinations to enrich themselves.

A convention of any of the above mentioned the size of our State Grange would be a controlling influence in the industry they would represent, while we only represent a small faction of the farming community, which is of itself one great reason why we should all work to add to our numbers.

Procrastination is the thief of time. If the seed time is delayed the sunshine and the rain have no material from which to produce a bountiful harvest.

The present year offers abundant opportunity to go forth and scatter the seeds. The staunch patrons of the wheels in California are the ones to direct the harrowing in, if necessary, that they may be productive of great and lasting good to the order, and it is sincerely trusted that every member in this State will lend their personal attention to them. Let us say to them: Whither thou goest I will go, and where thou lodgest I will lodge; thy people shall be my people, and thy God my God!

Pursuant to call, the Executive Committee met in special session on December 20th, as published in last week's issue of the RURAL, at which time a special meeting was called for December 27th. Present: Bros. Roache, Wal-

ton, Loucks, Mills and Holman. Bro. Cyrus Jones was absent on account of a previous engagement for that date. The condition of the order was discussed, but no definite action taken. The committee will meet again at Sacramento on Friday and Saturday, January 11 and 12, 1895, in conjunction with the legislative committee appointed by the State Grange. Headquarters will be at the Golden Eagle hotel.

This office acknowledges a short article and a list of officers from the worthy secretary of Tulare Grange, which appeared in last week's issue, covering the same ground as the article just received; consequently have concluded not to send it in this time. Thanks, sister secretary; let us hear from you often.

All secretaries should send in a list of their newly elected officers and put their granges in good standing as soon as possible. The new A. W. will soon be ready to send out. Look to it that your grange is entitled to receive it.

Some men "jump at conclusions;" others reach them by a process of reasoning. Some men say the grange is of no account; others who have taken note of what it has done and is now doing, call it the greatest organization for the benefit of farmers that ever existed, say our Eastern exchanges.

Our Grange Homes reports the order in a good healthy condition all through the New England States.

The progress of the grange, in some respects, has been slow and for this reason many have become discouraged and given up the work, while in other respects it has made immense strides and placed itself in the front rank as a means of social and legislative reform. On the whole, there are vastly more reasons for rejoicing than repining and every prospect that the wheels will move easier and faster in the future than in the past.

Address all communications for State Grange to Don Mills, secretary, Santa Rosa, Cal.

Sacramento Grange Officers.

SACRAMENTO, Dec. 31, 1894.

To THE RURAL:—I herewith send you a list of the elected officers of Sacramento Grange, No. 12: Master, E. G.

Health Restored

ALL RUN DOWN
No Strength nor Energy
Miserable



IN THE
EXTREME.
Hands
COVERED
—with—
SORES.

CURED BY USING

Ayer's Sarsaparilla

"Several years ago, my blood was in bad condition, my system all run down, and my general health very much impaired. My hands were covered with large sores, discharging all the time. I had no strength nor energy and my feelings were miserable in the extreme. At last, I commenced taking Ayer's Sarsaparilla and soon noticed a change for the better. My appetite returned and with it, renewed strength. Encouraged by these results, I kept on taking the Sarsaparilla, till I had used six bottles, and my health was restored."—A. A. TOWNS, prop. Harris House, Thompson, N. Dak.

Ayer's The Only Sarsaparilla

Admitted

AT THE WORLD'S FAIR

DOUBLE Breech-Loader \$5.00.
RIFLES \$1.75.
WATCHES

GUNS

BICYCLES \$15
All kinds cheaper than elsewhere. Before you buy send stamp for 50 page catalogue.
POWELL & CLEMENT CO.
168 N. 1st St., Cincinnati, O.

FINE BLOODED Cattle, Sheep, Hogs, Poultry, Sporting Dogs. Send stamps for Catalogues, 150 engravings.
N. P. BOYER & CO., Coatesville, Pa.

McMullen; Overseer, Geo. Hamilton; Lecturer, Frankie Greer; Steward, Bert Hayden; Ass't Steward, Geo. Burke; Chaplain, Mrs. R. E. McMullen; Treasurer, T. A. Lauder; Secretary, Adell Krull; Gate Keeper, Wm. Sims; Pomona, Nellie Sims; Flora, Lillian Duden; Ceres, Mrs. A. N. Youngman; Lady Assistant Steward, Jennie Sims; Pianist, Gussie Wilcox. Installation on January 12th.

I also send you list of Sacramento County Pomona Grange, No. 2: Master, S. H. Jackman; Overseer, Jos. Holmes; Lecturer, Hattie Jones; Steward, D. Flint; Ass't Steward, A. M. Plummer; Chaplain, David Lufkin; Treasurer, M. Sprague; Secretary, A. A. Krull; Gate Keeper, L. Schelmeyer; Pomona, N. Youngman; Flora, M. Krull; Ceres, A. M. Jackman; Lady Assistant Steward, Etta Plummer; Pianist, Adell Krull. Installation at next meeting. Respectfully,

ADELL KRULL,
Secretary Sacramento Grange.

BROWN'S BRONCHIAL TROCHES are unequalled for clearing the voice. Public speakers and singers the world over use them.

Seeds, Plants, Etc.

THE FINEST STOCK OF

Citrus and Deciduous Trees, BERRIES AND OTHER PLANTS.

In the State, at the Home Nurseries, Pasadena, Cal.

One and two-year-old Orange and Lemon Trees, the finest and thickest stock ever grown anywhere, and all the best varieties, also Pomelo (Grape Fruit), and the Japanese Red Dancy Tangerine Orange; also the best deciduous trees. Raspberries, Blackberries and the Wonderful Everbearing and other fine varieties of Strawberries. Nothing but the best of all varieties of Fruits and Nuts. Don't fail to write for prices to HEWITT & CORSON, Prop's, Pasadena, Cal.

OAK LAWN NURSERY

—FOR—

First-Class Fruit Trees.

HARRY E. HULBERT, Prop.

Grower and Dealer in

General Nursery Stock.

Salesyard, Cor. Third and Davis Sts.

Please send for Price Lists.

223 Third St., Santa Rosa, Sonoma County, Cal.

NURSERY STOCK FOR SALE.

Spark's Mammoth AND ROYAL APRICOTS and PRUNES.

Prices to Meet the Times.

Before purchasing elsewhere write—
N. B. SMITH, Ventura, Ventura Co., Cal.

FRUIT TREES.

FRENCH PRUNE, BARTLETT PEARS,
Apple, Peach, Cherry, Apricot and Almond
TREES.

First-Class Trees at very low prices.

E. GILL, Nurseryman, Oakland, Cal.

GENUINE

THOMPSON'S SEEDLESS GRAPE ROOTS

For Sale at \$10 per Thousand.

Also, a fine lot of Winter Nells and Bartlett Pear
Trees, six to eight feet high, at prices to suit the
times.

ROBERT DAVIS,

Yuba City, Sutter Co., Cal.

400,000 Fruit Trees

—OF—

Sacramento River Nursery Co.,

For sale at Cut Prices. No better trees in California. Terms and discounts satisfactory.
Address OSCAR KNOTT, Walnut Grove,
Or, A. R. HARVEY, Isleton.

TREES A FINE ASSORTMENT, best varieties, free from pests of any kind. Prunus Simoni, Bing, Rostraver and Murdoch Cherries; Black California Figs; Rice Soft Shell and other Almonds; American Sweet Chestnuts; Prapartureus Walnuts. Hardy mountain grown Orange Trees. Our oranges have stood 22 degrees this winter without injury. Dollar Strawberry, the best berry for home use or market. Address C. M. SILVA & SON, Lincoln, Placer County, California.



A Happy New Year

is bound to be your portion if you put into your ground the right kind of garden goods—the resultful grade of fruit trees. Send for our handsomely illustrated fruit tree catalogue, or for our illustrated general seed and plant catalogue.

Sunset Seed and Plant Co.,

427-9 Sansome st., San Francisco.

PLUMS!

"Plums—tell your people to grow the best plums; they will always find a good market."

So said several of the largest handlers of fruits in Chicago when the question was asked them recently, "What is the most profitable fruit to plant now?"

Clyman. Burbank. Mikado. Normand.
Satsuma. Tragedy. Kelsey. Diamond.
Grand Duke. Simou. Ickworth. Pond.

These are the best. Write for prices, which will be made very low.

Also, almost everything else in the Fruit and Nut Tree line. Seeds, Bulbs, Plants, etc.

LEONARD COATES,
Napa Valley Nurseries, NAPA, CAL.

James A. Anderson,
NURSEYMAN,
Lodi, San Joaquin County, Cal.

Has a Choice Stock of YEARLING NURSERY TREES for this season's planting. Guaranteed free from disease and insect pests, and at prices to suit the times.

Blenheim, Royal and French Apricots.
Hungarian, Tragedy and French Prunes.
Burbank, Satsuma and Kelsey Plums.
Ne Plus Ultra, La Prima, Texas Prolific, I. X. L., Nonpareil and Langueodoc Almonds.
Salway, Crawford, Muir and twenty other varieties of Peaches.

Also Nectarines, Apples, Pears, Cherries, Figs, Oranges, Lemons, etc.

Your prices are mine. Don't forget to write for particulars. Correspondence solicited and cheerfully answered. Address all communications,

J. A. ANDERSON, Lodi, Cal.

ESTABLISHED 1876.

MYROBOLAN NURSERY.

No Irrigation.

Growers of all the Leading
Varieties of Fruit Trees.

Correspondence solicited.

JAS. O'NEILL & SON, Haywards,
Alameda County, Cal.



FINE SMALL FRUITS a specialty.

CUTHBERT RASPBERRY.

Best Market Berry known; large, firm and luscious, stands travel finely, bears immensely, and has two crops a year; 30 cents per dozen; \$3 per 100. Also Strawberries, Blackberries, Gooseberries, Currants, etc., of the finest imported varieties. Prices on application. L. U. McCANN, Santa Cruz, Cal.

100,000

Olive Trees,

Mission and Nevadillo,
Three-Year-Old Stock,

4 to 6 Feet and 6 to 8 Feet High.
BOTTOM PRICES.

JOHN E. PACKARD,
Pomona, California.

TREES of GOLD plum, SPLENDOR prune, Van Deman quince—choice of Burbank's 20 Million "new creations." STARK Trees PREPAID everywhere. SAFE ARRIVAL guaranteed. The "great nurseries" save you over HALF. Millions of the best trees 70 years' experience can grow; they "live longer and bear better."—Sec. Morton, STARK, E+4, Louisiana, Mo., Rockport, Ill.

ALEXANDER & HAMMON,

RIO BONITO NURSERIES, Biggs, Butte Co., Cal.

DECIDUOUS FRUIT TREES

OUR SPECIALTY.

The most Complete Assortment of General Nursery Stock grown on the Pacific Coast.

1,000,000 Trees for the Season of 1894-95 in Stock.

Acknowledged everywhere to be equal to the best. Guaranteed to be healthy and free from scale or other pests.

Send for Catalogue and Prices. Correspondence solicited. Address:

Alexander & Hammon,
Biggs, Butte County, Cal.

INCORPORATED 1884.

500 ACRES.

California Nursery Company,

NILES, CALIFORNIA.

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Fruit Trees, Nut Trees, Small Fruits, Ornamental Trees
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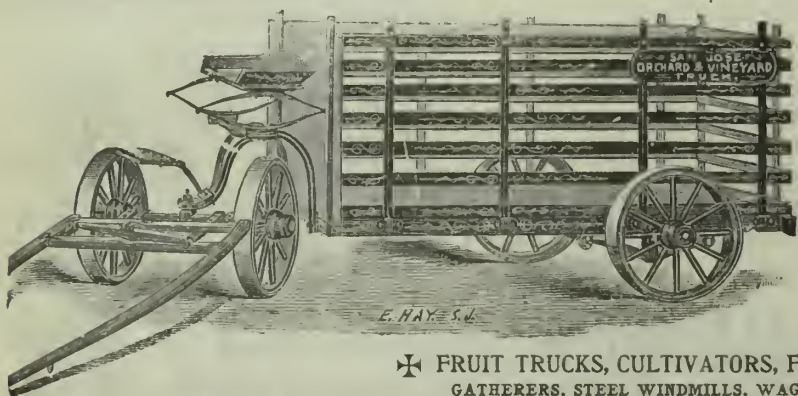
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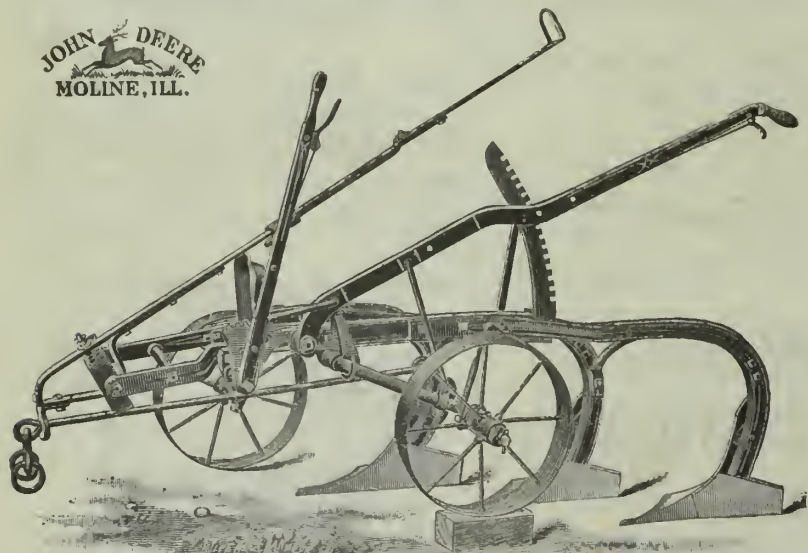
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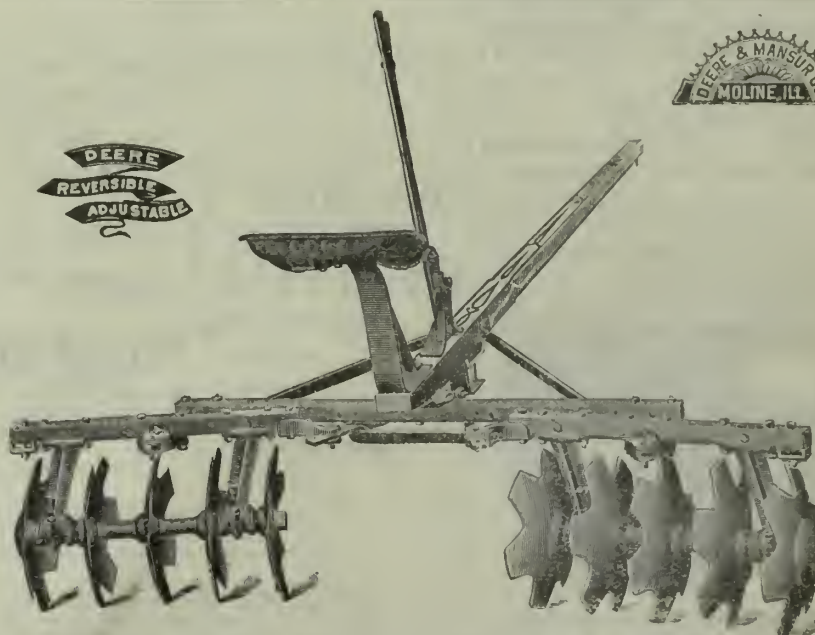
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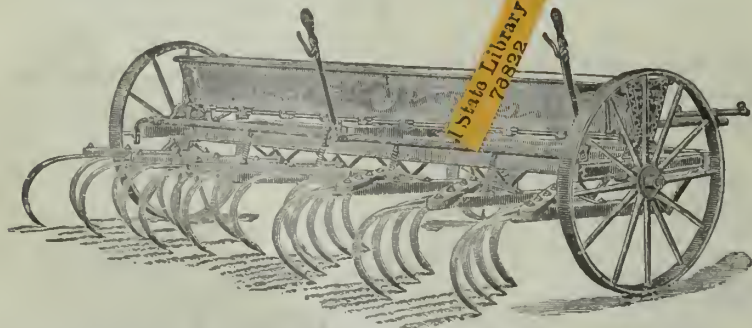
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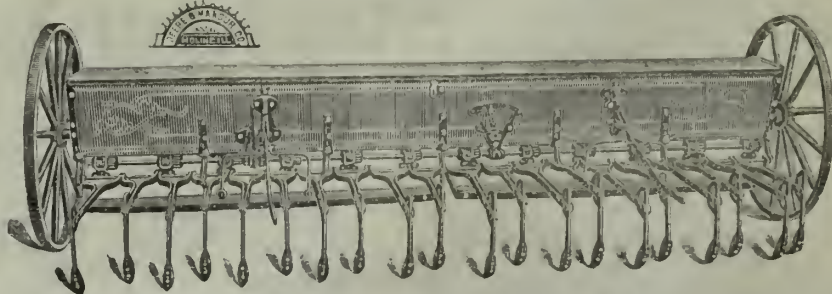
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THE PACIFIC RURAL PRESS

AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 2.

SAN FRANCISCO, SATURDAY, JANUARY 12, 1895.

TWENTY-FIFTH YEAR.
Office, 220 Market Street.



HON. JAMES H. BUDD, GOVERNOR OF CALIFORNIA.

Our New Governor.

Before this issue of the *RURAL* reaches remote readers the gentleman whose face adorns this page will probably be duly inaugurated Governor of California. He enjoys the distinction of being chosen as a Democrat while the whole galaxy comprising the rest of the State officers came from the Republican camp. James H. Budd has been a Californian nearly

all his life. He was educated in California schools and graduated at our State University. Following in his father's footsteps, he chose the profession of the law and residence and soon became prominent in public affairs in San Joaquin county. He has occupied various minor positions of trust and represented the State in Congress about twelve years ago. Of Mr. Budd's views and actions on public questions the *RURAL* has discoursed on other pages,

and will probably have future occasion to do so. On this page we merely present his handsome face to show our readers the manner of man who is their chief officer. He knows California and Californians well, and both for the honor of the State and his own we hope his administration may be characterized by purity, public spirit and disinterestedness. We certainly need such an administration and will honor the man who achieves it.

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Office, No. 220 Market St.; Elevator, No. 12 Front St., San Francisco, Cal.

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ALFRED HOLMAN.....Editor.
E. J. WICKSON.....Special Contributor.

San Francisco, January 12, 1895.

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The Week.

Weather and Crops.

We call attention to the interesting report by Sergt. Barwick, on another page, showing the situation as locally considered, in view of this year's generous rainfall. It looks as though we should have an old-fashioned year of great produce figures, and that counties which have not carried the banner for grain output for several years would be in the strife for it next harvest. Of course, this prospect for the arid regions always means too much for the low and otherwise moist lands, but so far injuries have been as little as could be expected under the circumstances. Some seed will be lost by overflow and some land will not be fit for the seeder for days or weeks, and this means rather late sowing, which is not desirable. Men and teams, too, have been idle for most of a month, and this means much cost of bacon and barley without anything to show for it. But this will be forgotten if the weather will only be contented with its record and give the people a show to go to work and do their part for a good year.

Pure Food Show.

There is soon to be inaugurated in this city an exposition of a very practical kind, namely, a Pure Food Show. It will be at the Mechanics' Pavilion, and, opening on Jan. 28th, will continue until Feb. 15th. The plan of this Show is to exhibit and advertise food commodities absolutely pure and to give instruction in their preparation. This will be done by Mrs. Lincoln, author of a widely known cook-book, who will accompany her lectures with practical demonstrations. This exposition has a special relation to the fruit interest of California because it affords a means of advertising our fruit products and of instructing the public in their preparation and use. It is a fact that it is not possible in any hotel or restaurant of San Francisco to get a dish of California dried fruits properly cooked; and this being the situation at home, what can we expect abroad? This ignorance, of course, works against the California fruit market; and if we are ever to have a great market the people must be taught how to prepare and how to use our product. A good place to begin is at home, and this coming Pure Food Show affords a good opportunity. There should be a magnificent display of California dried fruits, and in connection with it a cooking department in practical hands, with cooked samples for all who will eat them. This is good work for the State Horticultural Society or the State Board of Horticulture, or both.

Fair and the Wheat Deal.

There seems no doubt that the wheat "deal," which was represented last year by Mr. Louis Me-Glauffin by very large purchases in the San Francisco Produce Exchange, was backed by the late

James G. Fair. One broker who watched the wheat deal very closely has made some calculations, and he estimates that the losses to Fair will not exceed \$1,215,000 on the whole deal. The broker possesses an extensive knowledge of Fair's operations in the wheat market, and in discussing the matter said: "Those who have watched the big deal closely believe that the average price Fair paid for his wheat was \$1.07½ per cental, and not \$1.20, as has been quoted. The price for spot wheat yesterday was 90 cents, and even at the latter price there would be a loss of only 17½ cents per cental. Add to this 7½ cents for storage and 2½ cents for insurance, and the total loss per cental would be 27½ cents. It is not believed that Fair has over 200,000 tons of wheat at Port Costa. He has not to exceed 25,000 tons in the rest of the State. A total of 225,000 tons would amount to 4,500,000 centals. Figuring on a loss of 27½ cents per cental, Fair's entire loss on his wheat transaction would be \$1,215,000. Even these, I consider, are high figures." There has been some fear that the death of Mr. Fair would suddenly release his accumulations upon the market, to its utter and complete demoralization, but this is hardly to be expected. The trustees of the estate have ample authority; they understand the situation thoroughly, and it is believed that they will be careful to protect the market. There is, we are assured, no foundation in fact in the stories so industriously circulated that certain large lots of wheat at Port Costa are infested with weevil.

Florida Freeze.

Mail advices confirm all that the telegraph has said about the great affliction which our friends upon the Peninsula have undergone. The Jacksonville *Times-Union* of January 3rd comes with five columns of reports from all parts of the State, which show that the injuries are about as bad as could be inflicted. The heading of the long series of reports of evil give an impressive summary, thus:

FATAL WAS THE FREEZE.

The Damage in Florida Will Be Far More Than a Million Dollars.

ORANGES ARE UTTERLY RUINED.

And Very Great Pears Are Entertained for the Safety of Young Groves.

WEATHER BREAKS THE RECORD.

Mercury 14 Degrees in Jacksonville, and 18 Degrees at Tampa and Titusville.

THE RAILROADS ARE HEAVY LOSERS.

Freeze Will Cost the Florida Lines Alone Fully Half a Million Dollars—No Section of the State Escaped Pine-apple Crop is Said To Be Ruined.

Reading the records of disaster upon which the foregoing rests, we find mention of ice two inches thick on standing water; icicles ten feet long hanging from water tanks; mercury as low as 12 in some places, etc. Apprehension is great for the safety of the trees, and for the next year's crop, even if the trees survive. On the whole, the visitation is about as bad as it can be without giving Florida up as a semi-tropical country. It will no doubt bring great hardship to many people.

Dairy Exchanges.

All those interested in the problem of fruit marketing by producers will read with avidity the letter by Mr. Righter on another page, in which he cites with such good effect the example of co-operative selling as carried on by the dairy exchanges at the East. We can personally indorse what Mr. Righter says of the uniqueness and economy of the method there employed. It was not originated at Elgin, but at Utica, New York, in the year 1871, and the writer was associated with the enterprise at that time. For a few years previously New York buyers had made weekly visits to the region of the cheese factories, going from place to place and driving as hard a bargain as they could with the sellers, isolated as they were and unacquainted with the state of the market. Then came street markets at Little Falls and Herkimer, which were better in that the sellers met the buyers at one point, but, best of all, they were able to get some notion of the state of the market before closing with the buyers. From this arose by evolution the dairy exchanges of which Mr. Righter speaks, where there was a meeting room specially fitted up with blackboards upon which special dispatches and cables for the trade was almost wholly for export. The sellers now met the buyers fully informed upon the state of the market and a new era of dairy commerce began, of which Mr. Righter gives the recent results at Elgin. The dairy exchanges are continued in the New York points and constitute a decidedly unique feature in produce selling, as already stated. To the Utica Dairy Exchange there frequently came that distinguished New Yorker, Horatio Seymour, bringing his guests to show them the only place in the

world, as he said, where the producer met the buyer upon terms of equal advantage. It is true, the California fruit producer has much to learn from this experience of the dairymen. We are glad Mr. Righter has brought it up.

Orange Prices.

The elevation of California oranges by the Florida freeze still continues. It is reported from the South that there is brisk inquiry by telegraph and otherwise for fruit. The following facts come by telegraph from San Bernardino, Jan. 8th:

The Redlands Association has already shipped ten carloads to cities east of the Mississippi river, and this morning had orders for ten carloads more from the same market. This is phenomenal. The consumers for whom these oranges are purchased have been accustomed to use Florida fruit until that source of supply was exhausted, and toward March 1st they commenced sending in orders for California fruit.

Along with the increased demand comes a condition in prices which is certainly satisfactory. The first Navels which were shipped East last year were sold at \$1.50, and that was six weeks later than the present date. No Navels have yet been shipped East for less than \$2.50, a clear gain of \$1 over last year's prices. Seedlings are quoted at \$2, and cannot be had for less, and prices are not only firm at those figures, but already a move to advance them has been made. The Colton Exchange announced to-day that it would fill orders already received at \$2.50 for Navels, but that no more orders would be accepted at those prices. The Exchange has not announced at what figures they will accept orders, but it is understood that no more oranges will be sold by the Colton Exchange at less than \$3 per box.

It is announced that in San Bernardino four-fifths of the crop in the county is within the control of the Fruit Growers' Association. Oranges are ripening one month earlier than last season, owing to the long-continued hot weather late in the season, and the quality is superior to that of many years previous. This is very fortunate, in view of the present demand in Eastern markets.

The Poultry Show.

As the PACIFIC RURAL goes to press this week there is in progress in this city the greatest Poultry Show ever made on the Pacific coast, and one of the best ever made anywhere. The whole floor space of the Mechanics' Pavilion is occupied by coops in which about two thousand birds, representative of the standard and fancy breeds of chickens, turkeys, pigeons, etc., etc., are on exhibition. To those who have not kept track of our development in poultry lines it is a revelation to learn that California is close up to the head of the list for scientific breeding, and that the practical result is an interest which ranks with the larger and most profitable lines of industry. As an exposition the show is a pronounced success, and it is bound to stimulate fancy breeders and others to continued effort. As a business project, we fear the show has not been profitable. A succession of wet days have limited the attendance, and, as the expenses are heavy, it is to be feared that the association will be the loser for its enterprise. We omit premium statements until a list of the awards has been made up, but hope to be able to give it next week.

The Fruit Union.

An advertisement on another page announces the tenth annual meeting of the stockholders of the California Fruit Union. It will be remembered that at its last annual meeting the organization resolved to retire from active business, and, if we are not mistaken, the Fruit Union, as such, made no shipments during the last fruit season. Those growers who, toward the last, constituted the exchange, probably found they could dispose of their fruit in other ways to greater advantage, and so allowed the organization to take a nap. We presume it will never be awakened. Such an end to an affair which was begun with so much spirit ten years ago is not pleasant to contemplate. We hope it had rather advanced until, by this time, we could have a comprehensive co-operative marketing organization which would have prevented the intrusion of all the greed and exactions of transportation, refrigeration and selling companies which have so far flourished and grown fat, that the grower has found little or nothing for him in the grand business which covers so many millions of dollars. Still, though it has come so very far short of realizing the anticipations of its founders, the Fruit Union certainly did some distinguished services to the fruit interest, and it is upon these that the mind should rest, in view of its approaching dissolution. If it should conclude to die, let it rest in peace.

Pomological Society.

Next week, Wednesday, January 16th, the American Pomological Society will convene in Sacramento in the hall provided for the purpose by the citizens' committee of Sacramento. Excursion parties of Eastern members are already on their way westward, one of them including the president of the society. Prosper J. Berckmans of Georgia is expected to reach San Francisco on the 13th. The American Pomological Society is the oldest and most distinguished American society in the horticultural interest. It was established forty-five years ago and is therefore a twin sister of the State of California.

That these babes of '49 should first meet in '95 is an interesting fact. Both have had distinguished careers in their own lines. When the American Pomological Society was established, no charter member knew of California except as a sort of far-away ophir; and, to return the compliment, certainly no Californian of '49 had an idea that such a society would ever have any use for this country. But so much has been accomplished in American pomology during the last half century that no one could possibly have foreseen the attainments of the present day nor the vast area of earth's surface which a national pomological society must look upon as its parish. The work of the American Pomological Society has been upon progressive lines, and yet quite different from those which occupy most societies. It has labored long and earnestly for more scientific methods in pomology. It has done great things for the pomological nomenclature of America, and its lists are accepted as the most accurate attainable. It includes among its members, and always has, more of those who regarded pomology as a science than as an industrial affair, and yet it has never neglected the advancement of fruit production upon industrial lines. It has had among its officers and members such distinguished men as Marshall P. Wilder, Charles Downing, Patrick Barry, Wilson G. Flagg and others, who have gone to their reward. It has now as members the most distinguished Eastern pomologists. It will do Californians good to meet such people and to shake the kindly hands of the fathers of an industry which has reached such unexampled greatness on this coast. We trust there may be a general rallying of California fruit growers in Sacramento next week to welcome the guests of the State.

The Exchange Convention.

Mr. Adams, of the State Fruit Exchange, informs us that the Exchange has received the names of over sixty authorized delegates to the Convention of Exchanges to be held in this city during the coming week. These delegates are from the several local Exchanges, with power to fully represent the bodies which sent them. It is understood that the future of the State Exchange rests with them—hence the great importance of their meeting.

Gleanings.

PALERMO will ship thirty carloads of oranges this season.

THE Point Arena Creamery has paid a dividend of ten per cent for 1894.

VACAVILLE shipped upward of 1200 carloads of fresh and dried fruits in 1894, according to the *Reporter*.

LUTHER BURBANK will represent the Sonoma fruit growers at the Pomological Society meeting at Sacramento.

THE Sonoma fruit growers have warmly approved the appointment of Mark L. McDonald as a member of the State Board of Horticulture.

It is reported that the Orange Growers' Association will build at Fullerton one of the largest packing-houses in southern California. The contract was let this afternoon.

ORANGE COUNTY shipments for 1894 were as follows: Green and dried fruits, 3,360,000 pounds; raisins, 300,000; honey, 110,000; grain, 14,560,000; wine, 198,000; wool, \$85,000; total, 14,413,000 pounds.

A CREAMERY planned to take care of the product of 1000 cows is to be established at Bodega. It is to be owned in the neighborhood. J. D. Williams is president; L. S. Goodman, treasurer; and J. W. McCaughey, secretary.

THE *Riverside Press* reports the death of several horses from eating damp alfalfa hay. It was found that the hay had balled up in the intestines. The theory is that the animals do not chew the hay when it is wet as they do when it is dry.

SANTA ANA *Blade*: The bee men of this locality expect a good yield of honey the coming season. The thorough saturation of the earth by the recent copious rains insures plenty of flowers, and hence there will be good forage for the busy bee.

ROHNERVILLE *Herald*: The Fortuna fruit drier, which has just completed its first season's work, has proven a great boon to apple growers this fall in furnishing a market for a large portion of their product which has been heretofore next to valueless.

A WEST END correspondent of the *Hanford Journal* reports that the acreage of grain sown will be larger than ever before, as all feel confident of a bountiful harvest. The rains held off till late and we will get the benefit of all the moisture that falls. We therefore hope for a harvest again, even on the West Side.

THE Almy Olive Co. has been formed at Oroville. It has 80 acres planted to olives and will plant 160 more this season. Following are the officers: President, Hon. John C. Gray; Secretary and Manager, H. N. Almy; Treasurer, Bank of Rideout, Smith & Co. Directors—Hon. John C. Gray, E. W. Fogg, Warren Sexton, C. W. McAfee and Hon. W. A. Shippee.

THE Ontario *Observer* says that in Riverside county a wail is going up over the threatened extermination of the quail. In this county, and especially in this locality, quail are still numerous—so numerous, in fact, as to be regarded during the grape season as an unmitigated pest by vineyardists. During the grape season the killing of quail is permitted within one mile of a vineyard.

GONZALES *Tribune*: About 1200 tons of 1893 wheat have been sold in Gonzales during the past two weeks at an average price of 70 cents to the holder, or \$1 in San Francisco. The Sperry Flour Company of Salinas was the heaviest purchaser, some 600 tons belonging to the Quirk estate having been shipped to that company. Owing to the recent strengthening of the wheat market, this 1200 tons sold for about \$4000 more than it would have brought a month ago.

From an Independent Standpoint.

The project to keep Mr. Budd out of the Governorship has, as we predicted a month ago, completely exploded. It was never anything more than a personal scheme without even a partisan backing, and its promoters had only the hope of forcing from Mr. Budd some concessions in the way of patronage. With this hope they kept up the farce of threats until the last moment; and it is believed they were finally compelled to give up without reaping any advantage whatever. Budd is not the sort of man easily made afraid; he is a fighter "from away back," and this fact has been found out by those whose scheme it was to scare him into compromises. His inauguration has been fixed for Friday (we write on Wednesday), and before this paper reaches its readers he will be the Governor of California. The *RURAL* gives him greeting and Godspeed!

We have never made any pretense of enthusiasm about Mr. Budd, but his warmest personal and political supporter does not wish him greater success in his new duties and dignities than does the *RURAL PRESS*. We have had a long succession of inefficiency, venality, ignorance, drunkenness, imbecility and foolishness in the Governorship, and it is time for a change. Mr. Budd has youth, energy, education and fine talents and he ought to make—we believe he will make—a better Governor than California has had for twenty years. He has the chance, if he has the resolution, self-control and moral poise, to make himself the pre-eminent leader of the people in the new era which is upon us. It remains to be seen whether he will do it.

On Tuesday of this week, for the first time since his election, Mr. Budd talked frankly of public affairs. In conversation with a reporter, he said:

I am glad to know that there is on foot in the Assembly a movement for retrenchment and reform. Those were the only great doctrines I preached in the campaign, and they will dictate my policy as Governor. I am greatly pleased to know that the members of the lower house have already seriously discussed the matter, and I am convinced that if we work together upon this line, the people of the State will be saved from \$1,000,000 to \$2,000,000 in taxes. It will be my aim, and from what I have heard of the purposes of the leaders of the Legislature, it will be theirs, to take much of the State government out of politics and establish it upon a plane of civil service, where merit and efficiency will be the only badges for preferment. I believe in abolishing many commissions which I now deem useless. I believe in remodeling many others, preserving their beneficial phases and destroying their dangerous elements. I will under no circumstances urge any interference with institutions which serve a worthy purpose in the State. Such an idea is furthest from my mind. For instance, nearly every commission having scientific value, such as the Boards of Horticulture, Viticulture and others, can be withdrawn from politics and from governmental patronage in the form in which it is now given. It is my plan to place all of these commissions under the direction of the University of California and of Stanford University, giving certain boards to the care of one institution and other commissions to the second college. In that way at least seventy-five per cent of the expense now shouldered by the public will be removed. The Regents of the University of California will prescribe the duties of the commissions under their charge and the trustees of Stanford University will determine the work to be done by those under their direction. In that way no evil will be done to the State in the withdrawal of benefits now received. Officers who show their fitness for their positions will be retained. A system of civil service reform will be established, and I think will be found working to advantage. I have been so pressed with work that I have not the opportunity to investigate every institution as thoroughly as I wish, but I will accept the first chance. The encouragement of the members of the Assembly will stimulate me to harder work. I am glad to assume the position that partisan politics cuts no figure with us. We are officers of a great State, and, leaving out of consideration anything which may be done in the Governor's office, I think that California will have one of the best governments in its history.

This programme shows at least that our new Governor is planning a careful revision of State expenditures and that he is a man of ideas and not afraid of innovation. We shall, doubtless, have his plans in greater detail later on, and it will then be time to consider them critically.

The impression seems to be general that, inasmuch as the Legislature and the State officers generally are in political opposition, the new Governor will have small chance to enforce his plans. There is some foundation for this idea, for it is quite true that in legislative matters he will have no partisan co-operation. However, in the appointment of the various State commissions there is a very large measure of power. Even if his scheme for reorganization of the system should be rejected, there is still a large opportunity for him. Besides his office force the Governor appoints the Adjutant General, at his pleasure. The salary is \$3000, and there is an assistant at \$2400 and a clerk at \$1200. The Governor appoints one San Francisco Harbor Commissioner, March 12, 1895, and another (giving

him control of the Board) March 12, 1897. Control of the San Diego and Eureka Boards will be obtained in March, 1896. The San Francisco Port Wardens (four in number) will be appointed in January and March of this year. The San Diego Port Wardenship will be vacant in December. The pay is by fees—a system which should be changed for a fixed salary. The Pilot Commissioners also are paid by fees. They hold office at the Governor's pleasure. Three are in San Francisco, with a secretary at \$1200; one is in San Diego and another at Wilmington. Control of the Bank Commission will not be obtained until May, 1898. The Insurance Commission holds until April, 1898. Four Yosemite Commissioners go out in April, 1896. This will give the Governor control, and enable him to put a stop to some of the abuses in the management of the Valley affairs which have become so notorious.

In March of the present year the Commissioner of Labor Statistics will be appointed. The Board of Silk Culture, which receives no money, will be appointed in April, 1896. It consists of seven persons. The State Board of Arbitration, three members (pay, \$5 a day and traveling expenses while employed), are appointed "at the Governor's pleasure." The Governor obtains control of the Sutter Fort Board, of five members, in March, 1897. The Governor appoints the guardian of the Marshall monument (\$600 a year). The State Board of Health holds till January, 1897. The San Francisco Board of Health is appointed at the pleasure of the Governor. Control of the State Board of Dental Examiners will not be obtained till March, 1896. All the seven members of the State Board of Pharmacy go out of office next April. The State Mining Bureau is controlled by five trustees, who hold at the pleasure of the Governor. The Governor can appoint in May, 1897, the Commissioners of Building and Loan Associations. He appoints at pleasure the three Fish Commissioners. The term of the Commissioner of Public Works ends next March. The Debris Commissioner holds office till July 27, 1897. Salary \$3600, secretary \$1500. The two Commissioners of the Sacramento Funded Debt are reappointed in September, 1895, and September, 1896, respectively. In March, 1897, the Governor appoints the five members of the State Veterinary Medical Board. Each receives a salary of \$5 per diem when on official duty. There is no reason why this Board, like the Dental Examiners and the Board of Pharmacy, should not serve without pay. The Governor appoints "at pleasure" the three trustees of the State Burial Ground. He also appoints the San Francisco Registrar of Voters, salary \$3000, clerk \$1800, messenger \$1200. He is supposed to appoint the San Francisco Police Commissioners, whose term of office is so indefinite. There are nine members of the State Board of Horticulture. Five of them go out next September, and this will give the Governor control. The Viticultural Commission cannot be controlled until April, 1896. The State Board of Agriculture has twelve members. The Governor can appoint three next February, three in February, 1896, and three more, getting a control, in February, 1897. The forty-three district boards all come under his control by December, 1896. Governor Budd can appoint for 1896 two Regents of the University. The retiring members are Hon. Timothy Guy Phelps and Columbus Bartlett. He will appoint two more Regents in 1898, the retiring members being Hon. J. West Martin and George T. Marye, Jr. The Governor can appoint at pleasure all the trustees of the State Normal Schools; five for Chico, five for San Jose and five for Los Angeles. Next March the Governor appoints three of the five trustees of the Home for Feeble-Minded Children (Glen Ellen). This month he appoints one Director of the Stockton Insane Asylum, but the other four hold till 1897. He appoints two directors of the Napa Asylum in 1896; the others in 1898. At Agnews, three Directors, a majority, go out next February. Control of the Mendocino Asylum will be obtained next March, and control of the Southern California Asylum in May, 1896. All five of the Directors of the Deaf, Dumb and Blind Asylum at Berkeley go out of office next March. The Governor appoints at pleasure the five Directors of the Home for the Adult Blind in Oakland. There are five State Prison Directors, appointed for ten years. The Governor will appoint only two during his term of

office, one in 1896, another in 1898. The Governor will appoint two of the three trustees of the Whittier Reform School in 1895 and 1896. Control of the Preston School will be obtained in July, 1896.

This list shows how extensive are the appointing powers of the Governor, indirectly controlling as they do the disposal of very large sums of money and affecting the administration of public institutions. There are serious absurdities in the system. For instance, the prison directors hold for ten years and so require two terms of gubernatorial control to bring about a reorganization. In many cases the Boards are too large and cumbersome. Three members ought to be enough for the most important department, and in a majority of cases one trustee, or director, or commissioner, would be much better, reducing expenses, and serving to fix responsibility. There is an especial need of great care in appointments on the Board of Regents of the University and as trustees of the Normal Schools. Broad-gauge, capable, well-educated, public-spirited men who can give time to the work will reflect credit on the administration. There is no valid reason against the appointment of educated women on the Board of Regents and as Normal School trustees, and there are many strong reasons in favor of such a course, since women as well as men are educated at these institutions. This would be in accord with a plan already announced by Mr. Budd to appoint a woman on each of the asylum boards. Wiser still is his purpose to have a woman physician employed in each of the State institutions wherein women are confined.

Sacramento is having a "clearing out spell." For several months the city has been infested with tramps and hobos, and within the past few weeks there has been a succession of murders and robberies. The regular police organization confessed its inability to handle the problem, whereupon the citizens came together in mass-meeting, provided for the service of one thousand volunteer officers, and under the leadership of the Mayor proceeded to investigate the character of the floating population and to drive all questionable persons beyond the city limits, with warnings to remain away or suffer the penalty of a severe vagrant law especially provided for the emergency by the city council. As a consequence Sacramento is now rid of the hobo class and life and property are safe for the first time since the great strike. Among the vagrants thus driven from the city were a considerable body of men under the leadership of "Gen." Kelly of Industrial Army fame. While this method of dealing with the hobo class is very effective in one sense, in reality it only shifts the infliction from one locality to another. The tramps who have been driven from Sacramento will simply move on to some other place. What is needed is some means of dealing with the tramp as to make him give up vagrancy and go to work.

The young Czar of Russia, from whom such dreadful things were predicted by the European political critics, is proving himself to be a man of thoroughly modern ideas, of great energy of character, of high manly courage and of most humane disposition. He began by mingling freely among the people as if there were no such things as anarchists and bombs. His first political act was one of general clemency to State prisoners. Next he displaced certain high officials known to be corrupt. Now he is proposing a general system of reforms calculated to bring Russia more nearly into line with the governments of Western Europe. In order to maintain the respect and co-operation of his uncles he is about to convene a family council to consider plans of reform which, it is reported, include the establishment of an aristocratic body of State Counselors. This is probably as far as it is safe to go at this time, for Russia has not yet reached the stage of political development when it would be desirable or safe to inaugurate a representative parliamentary system.

Apples Grafted on Pears.

TO THE EDITOR:—In reply to R. M. Town's communication of Dec. 22d, I would say, after five years' experience, I have decided that apples on pears are not a success. Any kind of apples will grow and bear fine fruit, but the graft will not hold. The apple grows so fast that it absorbs all the sap and lets the pear stock decay, so it is easily broken off. I would advise trying a few before grafting all.

Soquel, Cal.

S. B. WALLACE.

Rainfall and Temperature.

The following data for the week ending 5 A. M., January 9, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.	Total Seasonal Rainfall to Date.	Total Seasonal Rainfall Last Year to Same Date.	Average Seasonal Rainfall to Date.	Maximum Temperature for the Week.	Minimum Temperature for the Week.
Eureka .....	...	...	26.00	16.66	...	...
Red Bluff	3.12	17.10	9.64	12.35	52	36
Sacramento	3.76	15.04	5.38	8.69	54	40
San Francisco	2.90	15.66	7.46	10.77	58	44
Fresno	1.68	6.35	1.84	5.13	56	32
Los Angeles	1.12	6.50	4.82	8.28	61	42
San Diego .....	.87	3.18	3.15	4.15	68	42
Yuma	T	2.21	1.42	1.80	68	38

Distant Shipment of Nursery Stock.

TO THE EDITOR:—In your issue of the 29th inst., and under the above heading, Messrs. Alexander and Hammon of the Rio Benito nurseries claim that they have solved the problem of shipping trees successfully to distant lands, especially where the equator has to be crossed; the claim being based upon the safe arrival in Australia of a lot of walnuts, the very class of trees that will stand transportation to distant lands the best.

Now, I will tell these gentlemen that if they have solved the problem of shipping nursery stock to distant lands, as far as they are concerned, the other no less enterprising nurserymen of California have not waited this long to solve the same problem for themselves. As I have had a twenty-five years experience in this kind of business, I thought it would interest the readers of the PRESS, near and far, to know how I did successfully ship trees of all kinds to distant lands, this side or the other side of the equator; and I will add that during these twenty-five years, I have imported, and am importing yet, every winter, trees of one kind or another from France, and shipped nut and fruit trees and grapes to such distant lands as New Zealand, Japan, Sandwich islands, Mexico, Bahama islands, etc.

My first importation of trees from France was in 1869, having ordered then 200 mulberry trees for silkworm feeding, via the Isthmus of Panama; the trees were packed in chaff in a box and arrived rather dried up, though I succeeded in growing 40 per cent of them. My second importation was in the winter of 1870-71 (the winter I started my present place), my consignment consisting of a general assortment of nut and fruit trees, shrubs and plants, but which, on account of the war with Prussia, was 129 days on the road; it came across the continent from New York to Sacramento, thence to Nevada City, arriving in the latter place on the 30th of March, 1871. Most of the trees were from five to six years old, regular large standard trees, and were laid in a box with roots at both ends solidly packed in moss, with no packing whatever at the center of the box. Well, I didn't lose a single tree, shrub or plant, except artichokes. However, in importing trees from Europe to California, I found out that hay and straw do not do for packing, and that dry moss is the best packing to use, especially when the trees have to remain a certain length of time in the hold of a steamer; for whenever such material as hay or straw is used for packing, the moisture of the roots will evaporate and be absorbed by the hay or straw, which will soon ferment, and the heat so created will kill most all the tops of the trees, sparing only the roots—exactly the reverse of frost, that will spare the tops but kill all the roots.

In 1887 I shipped a large consignment of trees to Wanganui, New Zealand, consisting of walnuts, chestnuts, almonds, filberts, prunes, plums, apricots, etc. I packed them in moss in boxes as solidly as I could, placing the roots at both ends. I used no packing of any kind; it is unnecessary when the bodies of the trees lie in the center of the box. The party who ordered the trees didn't have much confidence in dry packing to cross the equator, and he instructed me to use wet packing in one of the boxes, which I did. The trees left San Francisco by steamer on the 21st of October and arrived safely at Wanganui after having been thirty-two days in the hold of the steamer. They were all in tolerably good condition; those packed in dry moss succeeded much better than the ones packed in wet moss.

In the ensuing fall I shipped another large consignment of such trees to several parties of the same place, who had clubbed together to procure the kind of nut and fruit trees I advertised. This lot also left on October 21st, reaching New Zealand in pretty

good condition. A year afterward the success in growing the trees was reported to me as follows: The trees that did the best were the walnuts. This is easy to understand, for walnut trees have a long and thick tap root which would take a long time to dry up. Ninety per cent of the seedling walnuts succeeded as did all of the grafted ones; but only sixty per cent of the chestnuts and fifty per cent of the filberts grew. The fruit trees did well enough, but not as good as the walnuts. Trees that are out of the ground for a certain length of time and that have to remain in the hold of a steamer for several weeks, are bound to dry up some if dry packing is the method adopted. If the roots of the trees are plunged for several hours in water after being taken out of the box, the trees will soon revive and become as fresh and green as when taken out of the ground. If wet packing is used, there is a double danger to fear. Heating might set in; this would kill the trees down to the roots. Or, the moisture around the roots, coupled with the tropical heat, might induce the trees to prematurely bud out, particularly with fruit trees, which would be no less fatal to them.

As a general rule, this is the way I have trees shipped to me from France and the way that I ship to distant lands: I use boxes, not caring to have them hermetically closed, which should be avoided. I line the bottoms and sides of the boxes with heavy packing paper, and put in them a thick layer of moss, using dry moss altogether. In putting the trees in the boxes, with the roots at each end, I pack the roots solidly in moss and do not let them touch the sides, having them, in fact, completely surrounded by a thick layer of moss, pressed in well with the hand. If using wet packing do not let the tops of the trees, packed at the other end, rest on the wet packing, otherwise they may be liable to mold and rot. Such has been my whole secret in having trees successfully shipped to me, or in shipping trees myself to distant lands. For a shorter distance, as to any State of the Union or to Canada, and the trees being transported mostly by rail, I use wet packing, for there is no fear of the trees heating or budding prematurely. Wet packing keeps the roots and consequently the tops of the trees quite fresh. I have never received an unfavorable report, unless it be one of delay, this being on account of the trees being detained for an unreasonable length of time on the way to their destination.

Nevada City, Dec. 30, 1894. FELIX GILLET.

A Car for Shipping Fruit in Bulk.

We have received from R. H. Shoemaker, Jr., of Los Angeles, circulars describing the car used by the "Santa Fe Bulk Fruit Express Co.," which is intended to supersede box shipping. The entire car up to the doorway on each end is filled with trays and braced securely in center of car, thereby holding the trays together, so there is no jarring. The trays are made of slats, so as to give proper ventilation; are twelve inches wide, six inches deep, and are as long as the car is wide. They rest on tracks nine inches apart, giving three inches of air space between every six inches of fruit. The trays are folded and packed in the top of the car for the return trip.

It is claimed that one of the great advantages obtained by shipping in this manner over the old method of packing in boxes is that there is no necessity to wrap and pack in a very tight space and apply pressure in order to nail on the lids. The fruit may be loaded as soon as picked and graded, as it will cure on the way East, making it unnecessary to have large storage space in the packing houses to "sweat down" the fruit before packing. It is also claimed that the method saves about 3000 pounds on each car in weight on boxes alone, thereby allowing the shipper to load about 3000 pounds more fruit in each car at same cost. Packing expenses in the East are held to be less per car by about \$20 than they are here.

Napa Valley Nurseries Sold.

NAPA, January 8.—Leonard Coates yesterday sold the Napa Valley nurseries to Messrs. Armstrong, Parker & Co., of Mountain View. This sale embraces all of Mr. Coates' nursery interests in this county. The new firm is composed of gentlemen well acquainted with the nursery business. Mr. Armstrong was for several years superintendent of Timothy Hopkins' Sherwood Hall nurseries at Menlo Park, and the other gentlemen have had years of experience in the nursery business. It is the intention of the new firm to erect extensive hothouses and rent more land than was held by Mr. Coates and to go into the business of floriculture to supply the San Francisco market with cut flowers and hothouse plants. It is said that two acres will be put into sweet peas this spring, and that other plants will be grown in proportion.

W. H. MULLEN of Yankee Hill, in the foothills at an elevation of 1900 feet, sends us a table of rainfall for December up to the 22d, which shows a precipitation of 15.99 inches. Mr. Mullen says there is room up his way for those who desire mountain homes with plenty of water and productive soil.

WEATHER AND CROPS.

Crop Conditions and Outlook.

Report of the State Weather Office for December—Promise of a Great Crop Year.

The average monthly temperature for December was as follows for the Weather Bureau stations named: San Francisco 50°, Eureka 46°, Red Bluff 45°, Sacramento 47°, Fresno 48°, Los Angeles 54°, San Diego 55°, Independence 38°, and San Luis Obispo 51°.

As compared with the normal temperature there was a deficiency of heat reported from all parts of the State of from 1° to 3°, except at Fresno, where an excess of heat of 1° was reported.

The total precipitation was: For San Francisco 9.01 inches, Eureka 12.31, Red Bluff 11.01, Sacramento 8.86, Fresno 4.09, Los Angeles 4.63, San Diego 2.26, Independence 1.90, and San Luis Obispo 8.96 inches.

As compared with the normal precipitation an excess is reported at all points of from .16 of an inch at Los Angeles to 5.70 inches at Red Bluff, while San Diego reports a deficiency of .11 of an inch, the normal being 2.37 inches, while the December rainfall was 2.26 inches.

By special reports received from over 150 different parties in all portions of the State, the excess of rain over the normal has put one of the brightest phases on the rural industries of this State than has been known for many years past, especially in the great San Joaquin valley and in southern California. This thorough soaking of the soil, ranging from one to two feet deep, according to the quality of the ground, has brought great rejoicing to the farmer or granger element and thousands of acres will be plowed and sown to hay and grain, which would never have been thought possible under less favorable circumstances. A great many new orchards will be set out. In fact, to read the various reports from the different points of the State, one would be led to believe that the crop prospects for the coming season of 1895 will be the banner ones of this State, the like of which have not been enjoyed for years. At least, this is the tenor of the reports, which gives one who reads them a most pleasing and fascinating idea of the glittering prospects in store for our great State in 1895. It is therefore hoped that this gratifying outlook will continue to the end of the season, so that when it shall be asked "What will the harvest be?" the answer will proclaim it one of the most bounteous for years; for such a harvest is badly needed.

Feed was never better so early in the season than at present, and stock that was starving a few months ago in certain districts, is now sleeking up and looking in first-class condition. Dairy cows are averaging a pound of butter a day per cow. Such changes could only occur in a climate like that of the Golden West.

AMADOR (Jone)—Under the 11 inches of warm rains for the season, grass is well advanced and grazing is good. Early-sown grain in the foothills is also well advanced, but little grain has, however, been sown on the bottom lands because they are too wet.

ALAMEDA (Niles)—This month has been notable for the number of days that rain fell, which was twenty-one days—the highest record since December, 1852, when it rained twenty-two days. There has been very little plowing done, although in the hills some has been done; but no seeding has been done. Early potatoes, peas, etc., are doing well. Pastures have done well and stock is picking up fast. Pruning is nearly all done, and the prospects are most excellent for an abundant fruit crop. Light frosts were seen on but four days.

BUTTE (Oroville)—There has been over sixty carloads of oranges shipped from this vicinity this season so far, and many small growers have not picked their crops yet. (Palermo)—Grain is doing well and everything is looking remarkably well. (Honcut)—There never was a better prospect for good crops in this vicinity. (Biggs)—Crops look well and have not been injured by too much water so far. A large acreage has been sown in western Butte and all crops are looking better than usual. (Durham)—Early-sown wheat on summer-fallowed lands is doing well.

CALAVERAS (Milton)—Summer-fallow looking well. Feed is excellent, but the ground is too wet to work. The outlook is an average one.

COLUSA (Williams)—Grain that was supposed to have been dried up has nearly all come again, so the conditions in this section are very favorable. (Sites)—The heavy rains have sprouted all the grain not up before, and has revived most all that which seemed dead or dying from long dry weather. Heavy frosts at night retard the growth; but if we continue to have a fair amount of rain, the prospects for crops are very good. (Colusa)—The late rains have been very beneficial. The cold is causing the grain to stool out, and there are prospects for a good crop.

FRESNO (Reedley)—Wheat crop less than half seeded. Summer-fallow looking well. Green feed in great abundance. Frosts very light. (Fresno)—Rain has fallen in sufficient abundance to insure full wheat and alfalfa crops. (Easton)—The memory of the oldest inhabitant runneth not to the season when the crop prospects were more flattering than they are now. Wheat in many fields is several inches high. Every available acre will be sown. Orchards and vineyards thoroughly soaked; mountains covered with snow. Water for irrigation will be plentiful. (Huron)—There are 12,000 to 13,000 acres of grain sown within three miles of this place. Grain is all up and growing nicely and never looked better. There has not been quite as much grain put in as usual, but the farmers think there will be from 8000 to 12,000 acres put in in the next two weeks. At Pulvered there has been from 6000 to 7000 acres seeded, and more will be put in. Grain and feed are improving every day.

GLEN (Fruto)—Frosts and rain have alternately prevailed, with no perceptible bad effect on growing crops. Summer-fallow grain generally is coming up with a good stand, except such as was sown dry, much of which was sprouted by the early rains and died during the dry period following, and from present indications part of the early-sown grain will have to be resown.

INYO (Independence)—Killing frosts destroyed vegetation. Poor crops this year on account of dry weather. Plenty of rain this month, and with heavy snow on the mountains the prospects are very good for next spring.

KINGS (Hanford)—There is promise of a bountiful harvest, and the ranch people are busily engaged plowing and seeding. Feed is growing rapidly.

KERN—Agricultural Experiment Station near Bakersfield says rain has been of great advantage to farmers. The outlook is very bright. There is a large acreage of land in preparation for alfalfa—17,000 acres at least—and about 12,000 acres for grain, much of which is up and looking well. Potato digging has been practically finished. The crop is rather light, but quality excellent. The acreage is large and hard to estimate.

LOS ANGELES (Pasadena)—The rainfall was six inches, but fell so as to all soak in the greatest acreage of grain ever platted, and is already showing green. The general outlook is such as to warrant great rejoicing. Oranges are proving to be a large crop, and in view of the recent freeze in Florida are being looked after with more than ordinary care. (Agricultural Experiment Station near Pomona)—Farmers are busy plowing and seeding. It is expected that the largest crop of hay ever known will be gathered the coming season. Every available acre in the Pomona valley will be planted to hay

and oats. Everybody anticipates a good year. Highest and lowest temperatures, 78° and 34°, with 8.46 inches of rain. (Gorman's Station)—Copious rains have fallen. Slight frosts have occurred on two occasions. Grass is appearing on the hills, and the outlook for pasturage is good. These conditions obtain to Antelope valley. (Claremont)—The condition of crops is unusually good. Oranges a little later than usual, but there is a large crop, and they are in fine condition. There is also a large crop of lemons and olives, and all are now ripening. Recent rains have carpeted the whole country.

MENDOCINO (Ukiah)—Weather has been very favorable to all crops. The rain, though much in excess of ordinary seasons, has fallen so gradually as not to pack the ground or cause overflows or washing or drowning out. No damage from wind or water to report, but two killing frosts during the month. As a consequence, our pasturage and crop prospects are much better than an average condition.

MONTEREY (Jolon)—The rainfall for the month is 8.30 inches. The outlook never was better in this valley for good crops of grain and feed.

MADERA (Berendo)—Prospects for crops are good. Rainfall for the season, 7.30 inches. (Raymond)—Crops for December are in good condition.

MERCED (Merced)—Prospects for large crops are most excellent. Rainfall for the month, 4.23 inches, and for the season, 5.98 inches, as against 1.53 inches to a corresponding date last season. (Livingston)—Farmers are satisfied, although they have been delayed some by the rain. Most of them have their crops all in, and the rest are finishing. (Volta)—Weather conditions very favorable for grain crops and for pasturage in this vicinity. Nearly a full acreage of wheat and barley have already been sown. The grain has come up quickly and is looking well. Rainfall, 4.78 inches for the month. (Los Banos)—The crops are looking splendid.

MARIPOSA (Mariposa)—Crop conditions are very favorable. Although there has been for the season to date 18.34 inches of rain, there is no excess of moisture to injure the growing crops. The rains have delayed the putting in of crops, only about half having been put in. Grass generally looks fine, and stock is doing well.

NAPA (Rutherford)—Grain sown before the rains is looking well. All crops will be good. (Napa)—Grain and grass never looked more promising. Very little frost, and many fruit trees are in bloom.

NEVADA (Chicago Park)—Very little plowing was done before the rains, therefore no crop has as yet been put in.

PLACER (Loomis)—Rains delayed planting seed for hay, but that which was put in before the last storms of the month is up and doing well. Fruit prospects are very good. There will be quite an increase in the number of new orchards to be set out this year as compared with last year; oranges slightly split by the excessive rains, but not badly; the crop has been all gathered and sold. (Newcastle)—Orange picking has been somewhat delayed, but crop is about all gathered and marketed.

RIVERSIDE (Arliugton Heights)—The storm has been of great value to all interests. (Riverside)—No killing frosts, and mean temperature rather higher than usual; rainfall gentle and uniformly distributed, with the ground thoroughly soaked. The grain acreage will be large and the recently planted grain is well up. Oranges (Navels) are a larger crop than last year; seedlings light, Mediterranean Sweets increased, and other varieties about the same as last year. Fruit is maturing well and of exceptionally fine flavor; season's pack will be 2500 to 2500 cars. Rainfall for the month 5.76 inches. The soil is in fine condition for plowing. Seeding is progressing actively in all parts of the county; prospects are very fine for a splendid crop of grain and hay. There will be a large acreage of alfalfa sown this month and next. (San Jacinto)—There will be thousands of acres put in now shortly. The weather is all that could be desired.

SISKIYOU (Yreka)—The ground has been covered with snow since the 6th, which is favorable for it has been very cold. Some of the fall-sown grain was up, but made very little growth for lack of rain. The heavy rains in the middle and southern portions of the State early in the season did not reach us here, as we had had a very dry season, so much so that there has been but little plowing done, and the farmer without summer-fallow land will have a very busy spring to put in much of a crop. Acreage sown to wheat will be very much lessened the coming season. The present month, as the records show, has been considerably below the average temperature and very much above the average precipitation, there being, at the end of the month, over seven inches of snow on the level.

SUTTER (West Butte)—The summer-fallowed grain is backward on account of excessive cold rains, and but very little winter-sown grain has been put in. (Yuba City)—The total rainfall for the month was 11.13 inches and for the season 14.78 inches. The wet weather delayed wheat seeding but did not effect grain already in the ground, except in a few places on the low grounds where a few acres will be lost. Plowing will be rapidly carried forward as soon as the ground dries out enough to allow plowing to commence.

SACRAMENTO (Sacramento)—Grain is looking very well and promises to be a heavy crop. Fruit trees of all kinds are set full of buds. The red land is a little too wet to work, but bottom land is in fine order and is being seeded as fast as possible. Highest and lowest temperatures 58° and 30°, with 8.86 inches of rain. (Union House)—Crops are looking fine. Summer-fallowed wheat is looking remarkably well. (Orangevale)—Grain looking fine. No frost yet to speak of, and no damage has been done in this section by the heavy storms of wind and rain. (Isleton)—The rains of the latter part of the month have delayed the harvesting of the potato crop. There has been but one heavy frost on the 26th, which did no material damage. Hay has grown wonderfully, such as volunteer, and also alfalfa, which has to be pastured down. Wheat and barley is about all sown and is up above the ground about three inches; is beyond any danger from frosts. Rainfall for month, 8.05 inches. (Elk Grove)—There was a fair acreage of grain put in before the rains. The rains have filled all low places in the fields, and unless it is drained off it will be apt to drown out some grain. (Trask)—The heavy rains have retarded the harvesting of the late potato crop. There will be some loss on the extreme low lands and some alfalfa will be drowned out. A considerable loss may be looked for on trees which are set in low land, many acres of which are now under water. The seeding of alfalfa land will be put off; feed is good.

SONOMA (Sonoma)—Conditions favorable for a bountiful harvest. This is a "clover year," indicated by the remarkable growth of alfalfa. Outlook very favorable for fruit. The rainfall for December is 12.52 inches—greatly in excess of any previous season. (Petaluma)—There is an unusually large acreage of grain of all kinds sown and the outlook is very promising. Feed was never looking better and the fruit prospects are extremely good. (Sebastopol)—Stock find plenty of feed and are in good condition.

SAN JOAQUIN (Lodi)—Owing to the long-continued rains and lack of sunshine and warmth the growing crops have made but little progress, and but little plowing has been done. Not a fourth of the intended acreage has as yet been seeded. (Stockton)—Crops are in good condition, except in a few low spots where the seed has rotted on account of the lack of proper drainage. We look for no great growth until there has been a lot of sunshine. (Bethany)—The prolonged rains have been a great inconvenience for the farmers, many of them not having done any work for nearly a month, and from present appearances the acreage planted or sown to grain will be

much smaller than was expected. The grain already sown, growing rapidly.

STANISLAUS (Westley)—Crop prospects never better. (Newman)—The weather has been more favorable to crops in this section so far this season than it has been for twelve years past. There is more acreage under cultivation than ever before, and as there was hardly any crops raised here last season the land is expected to produce an immense crop. The ground is wet nearly three feet, which, with a few showers in March and April, will give us a good harvest. Rainfall for the month 7.35 inches. (Crows Landing)—Early sown grain is growing finely, as is also vegetation of all kinds. The prospects for the coming season look prosperous, and with a favorable spring the output will be a good one. About two-thirds of the crop is sown and the rest will be put in as soon as the weather will permit. Rainfall 7.79 inches. (Turlock)—The weather has been generally beneficial to all crops. On account of the excessive rains plowing has been stopped on the heavy lands. The only killing frost of the season occurred on the 25th. Rainfall for the month was 5.38 inches, and for the season 7.30 inches. Highest and lowest temperatures, 58° and 29°.

SANTA CLARA (Milpitas)—Crops are looking good for the season of the year. There has been no bad effects from the constant rains except the retarding of seeding. (San Jose)—Some sunshine and warmth would bring along the early sown grain, and also pastures, with a rush. There was a heavy frost on the 25th, with a temperature of 31°. (Evergreen)—The farmers are principally plowing and seeding for another season. The early sown grain is already up and looking quite well. There has been some delay on account of so much rain and the ground too wet to plow.

SANTA CRUZ (Watsonville)—Crop prospects never better. The rain for December was 14.30 inches, and for the season, 24.45 inches. (Santa Cruz)—The long continued rains have materially interfered with the farming interest; the ground is thoroughly soaked and will be in full condition for plowing and seeding. There have been no frosts of any consequence. The prospects are good for a large acreage of grain to be put in. There has been no damage from high winds or excessive rains.

SAN LUIS OBISPO (Paso Robles)—There has been plenty of rain for all kinds of crops that the farmers intend to plant or sow. Grain and grass are making a fine showing. Most all of the land is seeded, and the grain is above the ground and is looking fine. (Santa Margarita)—With over fourteen inches of rain for the season the prospects are really bright. Farmers are busy plowing in all directions. Stockmen are happy, as the grass is so far advanced that there is little fear of damage from frosts. (Arroyo Grande)—Cattle are looking well. The barley crop is partly sown, and a great acreage is being plowed and prepared for seeding to barley. The ground is too wet to plow. No damaging frosts. (San Luis Obispo)—The late rains have left our county in a better condition than it has been for years at a date so early in the season. Cholame, Shandon, Creston, Estrella and San Miguel, our best wheat districts, are well cultivated and a large acreage of wheat has been put in. The wheat that was sown early, which is now up, looks fine indeed. On the coast there is considerable plowing being done, but very little sowing. There is plenty of time for the barley crop. The dairy districts of San Simeon, Cambria, Cayucos, Chorro, Moro, San Luis Obispo, Arroyo Grande and Nipomo are all doing well on account of the feed. Pasturage is excellent now. On some of the dairies where they were not overstocked, the fall cows are making almost one pound of butter per head per day. There has been some sickness among cattle on two or three dairies, but it is about all over at present.

SANTA BARBARA (Santa Maria)—Weather very favorable throughout the month. Feed is fine and cattle are thriving well. No frost since the 3rd, when it was light. Highest and lowest temperatures, 74° and 36°, with 3.86 inches of rain, and for the season, 5.72 inches. (Los Alamos)—Season not far enough advanced to report upon the crop condition, as seeding has only just begun in this section. The rains of the month have put the land in an excellent condition for cultivation.

SAN BERNARDINO (Chino)—The season's rain, which commenced on the 5th, came very opportunely. The precipitation for the month was 8.22 inches. Plowing, and sowing barley, commenced immediately. A great deal of barley is now up and it is doing nicely. About 5000 acres of Chino land will be sown to grain that were never cultivated before, and nothing short of a calamity can now prevent a heavy harvest. About 8000 acres will be planted to sugar beets, of which over 2000 acres will be new land. The prospects could not be better for a good crop at present. (Redlands)—Rainfall for the month, 7.38 inches, and for the season, 7.71 inches. The largest acreage of grain for years has been and is still being sown. The orange crop has commenced to move, and while there will not be an extra-sized crop, the quality is very fine. Shipments from this locality will probably aggregate 450 cars. The crop for the season will not amount to more than 6000 carloads for all of southern California. Prospects for agriculture and horticulture in all lines never looked better.

SAN DIEGO (Fallbrook)—No general crops are standing here this month, except dry-sown grain, which is sprouting vigorously, caused by the late abundant rains. No damaging phenomena have occurred. Tender vegetation, tomatoes, sweet potatoes, bananas, citrus shoots, etc., are still growing. Fruits are rapidly superseding field crops here. (Escondido)—Early sown grain is coming up finely. This season, so far, gives better prospects for good crops than have been known here for twelve years past. The recent rains wet the ground to a depth of ten to fifteen inches. The greater portion of the area devoted to grain is now seeded, and hundreds of acres are beginning to show green.

TENAMA (Red Bluff)—Little, if any, outdoor work has been done, and plowing and seeding is behind. Vegetation is in an advanced stage, grain being well up and grass on the ranges also plentiful. The ground is thoroughly soaked and everything points toward good crops for the coming year. (Tehama)—Weather has been good for early sown grain. Most of the winter sown will be late, it being too wet this month to plow.

TULARE (Tulare)—The crop conditions are excellent; never were better. Early sown grain up and looking fine. More acreage has been sown than for many years. (Goshen)—The rains have put the ground in fine condition for seeding, and plowing is going on rapidly. Feed is starting nicely and making the ranchers look pleasant. (Grangeville)—There will be quite a number of trees set out this season; much over 4000 will be planted in this immediate vicinity. (Tipton)—Since the late rains farmers have begun operations in earnest. The majority of them seem to have great faith in the coming year.

VENTURA (Saticoy)—Crop prospects are good, the weather being mild and warm, and everything has grown rapidly. (Santa Paula)—The month has been a very favorable one for farmers. There have been about five inches of rain, putting the soil in good condition for bean and corn planting when the planting time comes. (Fremontville)—Feed has started nicely and the anxiety of the farmers has been relieved. Much barley was dry sown on account of the scarcity of feed, and it has started very nicely. The remainder of the crop is being put in. (Ventura)—Warm weather and frequent rains have been unusually favorable for feed, which, in the hills, is good. The most severe windstorm experienced here in years blew from the northeast on the 24th, 25th, 26th and 27th, drying up the soil greatly. This was followed by a rainfall of .56 of an inch, thereby overcoming all damage done by the dry winds. Fruit growers report the buds on young apricot trees to have set well, promising, with favorable weather, a fair crop. This

is true generally of all deciduous fruits. Orange buds quite as full as usual. Rainfall 3.15 inches. Highest and lowest temperatures 68° and 39°. (Hueneme).—The weather has been favorable the early part of the month to crops of barley and wheat that were sown, but the last few east-windy days did no good. The rainfall for the month is 3.36 inches. The rains of the last days of the month were needed to counteract the effects of the few days of drying easterly winds which, coming from off the desert regions, were dry instead of moist.

YUBA (Marysville).—The summer-fallowed wheat is nearly all up, and has not been affected by the late storms. Plowing is suspended everywhere, the ground being too wet. The rivers have not risen sufficiently high to overflow the bottom lands, so there is plenty of feed available there yet. There is little if any water standing on the lands, and everything looks quite favorable for good crops up to date. The slight frosts do not appear to have affected the orange and lemon trees. Orchard work is a little behind. (Wheatland).—Early sown grain looks remarkably well, notwithstanding the excessive rains. Winter plowing and sowing will be late and the acreage limited. Rainfall for the month 10.75 inches.

YOLO (Dunnigan).—Crops are in very good condition on high lands. Highest and lowest temperatures 66° and 30°, with a rainfall of 11.22 inches, and for the season 14.26 inches. (Winters).—Weather has been unusually mild for the season, accompanied by gentle rains amounting to 16.40 inches for the month and 21 inches for the season. Highest and lowest temperatures 55° and 35°.

HUMBOLDT (Eureka).—Grass is looking well and the cattle are doing well. The continuous rains have retarded outdoor work considerably. Highest and lowest temperatures, 60° and 30°, with 12.31 inches of rain for the month.

FRUIT MARKETING.

The Exchange Method in Selling Produce.

TO THE EDITOR:—I believe that all of our dried fruits should be sold by the Exchange method, for the reason that both the buying and selling can be done by this method at the least possible cost to both parties. The present ruinously low prices of dried fruit render its adoption an urgent necessity. It is not only by far the cheapest, but one that secures to the seller the highest price the buyer will pay. No seller can obtain more. For the benefit of those who may not be familiar with this method, permit me to very briefly and, so far as I am able, clearly explain it.

As the Producers' Exchange at Elgin, Illinois, known as the "Elgin Board of Trade," is not only a very simple organization, but also the most successful one of which I have any knowledge, I will, therefore, refer to it in exemplifying this method. In the room where this Exchange's sales are made is a large blackboard divided into columns. In the proper column opposite the name of each factory is written the quantity, quality and the selling price, if it is given; if it is not given, the letters "op." are written instead, which mean it is optional with the factory whether the bid is or is not accepted. Sales occur weekly and occupy one hour. The sales are all f. o. b., net spot cash. The seller's responsibility ends when he puts the goods on board the cars. Nothing is consigned. There is no storage, insurance or commission paid on products sold by the Exchange. The secretary does the selling and makes a record of the sale. The following will further illustrate the method:

BLACKBOARD.

Advertising Space.

Offered by Factory.	Quantity, Butter Tubs.	Quality	Asks.	Bid.	Sold to
Genoa.....	25	A1.	28c	28c	E. L. Newberry, Chicago
Cobb.....	25	"	op.	28	W. E. Lawrence, Washington, D.C.
Woodstock...	40	"	op.	27½	J. D. Stockton, New York
South Elgin.	60	"	28	27½	S. R. U'dell, Boston
Concord.....	30	"	28	28	S. Sands, Cincinnati, O.
Honover.....	25	"	op.	28	W. D. Storer, Indianapolis
Elkhorn.....	28	"	28	28	L. W. Wood & Co., San Francisco

If the seller accepts the price bid, his product is checked off; if not, it remains there to be sold at a subsequent sale. If the buyer is not present, he is usually represented by his broker, and the sellers are generally present or are represented by the secretary or some one else. The buyers pay their brokers one-fourth cent per pound for their services.

The Exchange expenses are equally borne by the equally benefited parties, namely, the buyers, sellers and other members. In this Exchange about two-thirds are sellers. There are but two salaried officers in the Exchange, namely, the secretary and sergeant-at-arms. The former receives \$250 a year for his services in making and recording the weekly sales and the latter \$25 a year. The principal portion of the secretary's salary is paid by a large number of newspapers for reports of the Exchange's weekly sales. For these weekly reports each paper pays him \$1.

The cost of conducting this Exchange—at least to the buyers and sellers—is next to nothing. For example, during the year 1892 its membership was 278. Each member paid \$2 annual dues, making in the aggregate \$556. The entire year's running expenses were paid out of this \$556. Since the membership consisted of about two-thirds producers, the entire cost to them was about \$372. At this pittance of

cost they sold products through the Exchange that year to the amount of \$8,315,286.22, the average price of butter being 25½ cents per pound. The membership during 1893 was 293, and the sales were in the aggregate \$8,639,057.87. The average price of butter that year was 26 cents per pound. Notwithstanding the great financial panic of 1893, the producers sold more butter and at a higher price that year than during the year 1892. Like other Exchanges, this one has a Committee of Arbitration and a Committee of Appeals, both jointly selected by the buyers, sellers and other members. The decisions of the latter committee are final and binding on both parties. These two committees settle all matters of dispute relating to Exchange sales.

AN APPLICATION TO THE PRUNE CROP.

In 1893 the prune crop of Santa Clara valley was, in round numbers, 40,000,000 pounds. The usual commission paid for selling dried fruit in this State is five per cent, or one-twentieth of the gross value of the crop. Hence, 2,000,000 pounds valued at five cents per pound, or \$100,000 was paid for merely selling that year's prune crop. Add to this the cost of selling the apricots, peaches and the other dried fruits of this valley and the sum is enormously large. It goes without saying that it is a great deal larger than the producers ought to pay, and more than I believe they will long continue to pay. It is certainly far more than would be required to sell all the dried fruit of the whole State, raisins included, if sold by the Exchange method.

By this method the fruit can be sold for the cost of selling it, the fruit growers paying only their just proportion of that cost. This would leave in the fruit growers' pockets a large sum that is now taken out to pay for selling. Those to whom you are paying this very large sum for this very small service will urge you very earnestly not to make any change. If the Exchange method promised them more than the one now employed, they would as earnestly urge you to adopt that method. In other words, they are impelled solely by their interests, not yours, as you must certainly know. If you adopt the Exchange method, you will do so to protect your own interests, and not to increase the income of others by decreasing your own. This is not a love-and-affection matter on the part of either party; but, on the other hand, is simply pure, clean-cut, unalloyed, cold-blooded business on the part of both. It is business on the part of those who are now selling your fruit to the jobbers to take for their services all the traffic will bear, and it is business on your part to get that service at as little cost as possible.

I do not blame these people for buying your fruit at the lowest price and then selling it to the jobbers at the highest price. Neither is the jobber at fault for buying at the very lowest price. Their self-protection, like those of whom they buy, forces them to buy at what they believe to be the lowest price. They are not to blame; the fault is not in them, but in the method of sale. If one jobber buys at a lower price than the others, he is thereby enabled to force the others either to lose their money or their customers as they may choose.

Put All Buyers on the Same Footing.—The method of sale should be such as to place all buyers on the same footing in buying and thereby give each an equal chance with the others in selling. This the Exchange method does, and hence is popular with the wholesale trade. If the fruit-growers will not put themselves into the hands of those seeking to prevent the adoption of this method there is nothing to prevent its adoption. Unless the fruit-growers make themselves the tools to be used in effecting their own financial interests they are not in immediate danger of financial ruin. If you will work together you have ample capital, credit and ability to do all that is suggested.

Will Not Producers Unite?—I have often heard it said that producers are so ignorant, dishonest, jealous and suspicious that they would not trust each other, and hence could not co-operate. Do you suppose your morals are of a lower grade than are the morals of those who thus criticize you or do you presume to be their moral equal? Many fruit-growers are either retired business men or those still engaged in active business. Are they less capable on account of being producers? Are they not more in sympathy with fruit-growers than those not engaged in that business? Other things being equal, is it not wisest to trust those whose business interests are identical with yours, or, in other words, trust yourselves? The reasonable presumption is you will trust yourselves to do your own business, at cost, rather than pay a great deal more to have others do it for you, since you are not in need of ways and means of keeping your income down nor of making a further reduction. The fruit-growers' co-operative associations of this State prove that you are trying, instead, to decrease your expenses and thus increase your income. They also prove that you have the capacity to do your own business—that you are not afraid to trust each other both in the preparation and sale of your products and that you can do something toward self-protection.

What the Exchanges Have Done.—The truth is you have, through these organizations, not only protected yourselves to some extent, but also all the wholesale

buyers, if not the retail dealers, throughout the entire country. While the prices of dried fruits have been and still are ruinously low, no one pretends to say that they would not have been much lower had it not been for the course pursued by those organizations. They steadied and maintained prices in spite of all the efforts to force them lower. They have thus been giving, and will doubtless continue to give the jobbers well nigh a guaranteed price, notwithstanding its being an "off year." By this course they hoped to obtain for this year's labor at least a poor living. It was the only course that promised that much. Had you acted less wisely in the management of these organizations your fruits would most probably not have paid the cost of production. You would not only have injured yourselves very seriously, but those also who bought large quantities of you believing you would manage the sale of your products more wisely. Before the fruit of the State can be sold at the least possible cost it must all be accurately graded, which can be cheaply done by the use of a modern dried fruit grader, thus producing grades that will be identical throughout. Type samples of each of these different grades can be furnished to every carload buyer in the United States and Canada as well as to all large foreign buyers. With these samples before them they can buy through the Exchange understandingly, even though not represented at the sale either in person or by a broker. The Exchange would of course have to guarantee the fruit sold to be of the same grade as the sample.

Fair Dealing Promoted.—The Exchange method keeps the buyers and sellers in the closest possible touch, which relation is very important to both. The producers are in position, and judging from the past have the disposition to give the facts relating to the supply, and the jobber's position enables him to give the facts relating to the demand. When these facts are known to both parties the law of supply and demand may be relied upon to govern the prices. For either party to attempt to deceive the other with reference to either the supply or the demand is not business, since the effort serves to accomplish little if anything more than to destroy confidence in each other. It is now known that the producers' estimate of last year's fruit crop was worthy of credence, and there is ample reason to believe that this year's estimate will prove to be. Last year's prune crop was estimated too high, and so also was this year's in the early part of the season, but as soon as a close estimate could be made it was made and published, so that jobbers might know as fully as the producers what the supply is. This was done on the theory of things that to establish and maintain business relations, permanently satisfactory business must be conducted on right lines.

The Saving Again.—In order to compare the cost of the present method of sale with the Exchange method, I will again call your attention to the Elgin Exchange sales of 1892. This Exchange's sales during that year amounted in the aggregate to \$8,315,286.22, and they cost the producers \$372. Had dried fruit of that value been sold for California producers it would have cost them five per cent of that sum, or \$415,764.31, or \$415,392.31 more; or, in other words, more than 1117 times as much as it cost the Elgin producers.

These figures prove conclusively that an astonishingly large sum can be saved by adopting this long tried and very successful method of selling. Will the producers of California dried fruits show as good judgment in the preparation and sale of their products as the Elgin producers have shown in the preparation and sale of theirs? If they will not they can only look forward to irreparable loss. The facts and figures given in this article relating to the Elgin Exchange were taken from the records of that organization and hence are entirely reliable.

Campbell, Santa Clara Co. F. M. RIGHTER.

HORTICULTURE.

Nursery Irrigation.

TO THE EDITOR:—It occurred to me when reading the article of Mr. Kirkman in the *RURAL PRESS* of Dec. 29th, that, were I a novice in horticulture, this article would tend greatly to cause me to forever shun irrigated nursery trees. The theory of the irrigated tree with its multitude of little root fibers sounds plausible, but how those little fibers are going to be kept alive during packing, shipping and planting is more than I can see through from a practical standpoint.

I have planted many such trees, many years ago, and the little rootlets always had to be trimmed off, being dead or bruised. Here is a great expense in labor. Facts do not bear out Mr. Kirkman's theory. It is only of late years, comparatively, that there were any irrigated nurseries, and yet it seems to me there are many thousands of acres of fine orchards, bearing before nurseries were started in the arid regions.

Mr. K. speaks without full knowledge of the subject. In rich lands in all the bay counties, and along

river bottoms, the moisture is sufficiently near the surface at all seasons of the year to keep growing a plentiful supply of lateral roots without the addition of water artificially applied.

We had, however, a sample growth of "irrigated" trees this year, owing to the early October rains and the subsequent hot weather—many little rootlets near the surface. But let the north wind blow on them a few hours while trees are being dug, or while they are being hauled or planted, and the last state of that tree is worse than the first.

Another practical objection to the irrigated tree is that it is too large for any but the amateur with a yard 16x20 feet. A large, rapidly grown tree, with necessarily softer wood than one of smaller diameter, when cut down to fifteen or twenty inches from the ground, has great difficulty in getting its cut surface healed over. A great many of the largest and most successful growers in the State make this a condition when purchasing trees—that they shall be of a medium size.

The statement of Mr. K. that the roots of the un-irrigated tree are found "certainly not within the foot or more of dry top soil. They have lost their functions long ago through lack of action," is about as far from a statement of fact as if he had said the roots had gone on until they broke the earth's crust in the antipodes. In all the bay counties, through all the rich Sacramento valley in the river bottoms, in hundreds of thousands of acres, any crops can be grown that require moisture within a few inches of the surface, and with no irrigation.

Irrigate, by all means, *where it is needed*, but those in the arid regions cannot make us believe what is contrary to the evidence of our own senses, or persuade us that a healthy irrigated tree (like a greenhouse plant) is better or hardier than a healthy tree grown naturally.

LEONARD COATES.

Napa, Dec. 29, 1894.

Lye for Olive Pickling.

TO THE EDITOR:—In the publications of the University Experiment Station, attention has repeatedly been called to the very unequal strength and value of commercial "concentrated lye," which forms so important an ingredient in the preparation of insecticide washes in the curing of olives for pickles and for many other domestic uses. Of late a good many inquiries as to the proper strength of lye to be used in olive pickling have come to us, and we are experimenting on the subject with different varieties. Our stock of "Greenbank" alkali being out, a few cans of concentrated lye were procured from a neighboring grocer. On testing the strength of the preparation sent—"Keystone Concentrated Lye"—it was found that it ranged from only thirteen to about seventeen per cent of caustic soda, the rest being, in the main, common salt.

Imagine the result of using such low-grade stuff instead of the eighty-five to ninety-eight per cent article supposed to be employed in either of the above agricultural operations. We would doubtless receive many indignant letters, and spicy paragraphs would be sent to the newspapers commenting on the uselessness of relying on anything that the station at Berkeley advised.

In view of these facts, it should be fully understood by those testing prescriptions given, whether for washes or for curing olives, that the quantities given refer to such standard brands as the "Greenbank" or equivalent grades, and that "concentrated lye" bought at random from grocery stores may contain less than one-seventh of the amount of alkali intended to be used and prescribed by us or others.

Berkeley, Jan. 5, 1895.

E. W. HILGARD.

THE ORNITHOLOGIST.

Beneficial vs. Injurious Birds.

It is useful and important to every man and woman who cultivates the soil for either pleasure or profit—and doubly so to every teacher—to know the benefits from the injurious birds in the locality where we live. Unfortunately this knowledge is too limited among all classes. Each woman who desires to adorn her grounds with attractive flowers knows how persistently she must combat the slugs, beetles, plant lice, and grasshoppers. Every man realizes that from the moment a seed is placed till the fruit is ready to pluck he has to contend against injurious insects, hence it is of the greatest importance to be able to distinguish which of the hundred species of birds in our country are beneficial to him and aid in keeping down the countless swarms of insects that are injurious to vegetation. When he knows a feathered friend from a feathered foe it behooves him to guard the life of the former and not suffer it to be sacrificed through the cruelty of men and boys. Every lady here is interested in this matter, for her love of adornment has led to the slaughter of millions of insect-eating birds. Each year in Europe and America \$300,000,000 worth of food and fiber plants are destroyed by insects which birds keep in check, yet in the face of this enormous loss 5,000,000 birds are annually destroyed in the two continents named, for

feminine embellishment. In many States laws have been passed protecting the beneficial birds from their human enemies, but in California protection to our feathered friends is too little appreciated.

Some instances of wholesale destruction of birds and the resultant evils may show the importance of this. At North Bridgewater in 1820 birds were killed in such quantities that cart loads of their bodies were used for mauling the ground. The woods and orchards were decimated of their feathered tenants and as a result great injury was done to vegetation by insects that had hitherto been kept in check by their natural enemies. In 1860 the residents of a town in Pennsylvania organized a shooting match and killed off all the birds in the neighborhood. Not only the game birds but the larks, robins, swallows, and all others. The killing took place about the last of May and during that summer scarcely a bird was seen in the neighborhood. As a result the cut worms ravaged the cabbage fields, whole orchards were destroyed by borers and caterpillars, and army worms devoured a third of the grain crops. The farmers realized their mistake but the damage was not remedied in a single season for there were not birds enough for two or three years to prevent the ravages of the insects.

Locusts were unknown on the Isle of Bourbon till some were accidentally brought from Madagascar. They increased so rapidly that the people were frightened and sought birds that would destroy the pests. The blackbird was brought from India but the farmers watched these pecking in the fields and believed they were eating the crops so the birds were quickly killed. The locusts now increased so prodigiously that no means could be found for exterminating them and more blackbirds were brought to the island. In a few months the locusts were greatly lessened in numbers and were finally utterly destroyed.

A farmer's son in Ohio watched a flock of quail in his father's corn field, and, after the birds had spent an hour industriously running from hill to hill, shot one of them and ripped open its stomach to see how much corn had been devoured. There was one cut worm, twenty-one striped vine bugs and 100 chinch bugs but not a single kernel of corn.

More than forty years ago horticulturists near Boston petitioned the Legislature to repeal the law protecting the robin from being killed by sportsmen. Prof. Jenks was one of a committee to try the robin and ascertain whether he deserved death or not. He found on a careful examination of the bird's stomach that from the first of March till the last of April the robin lived upon the larvæ of the *bibio albipennis* which was very destructive to strawberries, vines and other food plants. During May and June he lived upon worms and injurious insects, while in August and September he lived largely upon the seeds and berries of noxious plants. When Prof. Jenks made his report showing what the robins fed upon, the fruit growers at once withdrew their petition and thus warfare upon this beneficial bird was averted.

Nearly a hundred years ago the forests of Saxony were almost destroyed by insects which fed upon the foliage and tender wood. When a careful examination was made by competent naturalists it was learned that the vast increase of these pests was due to the killing of their natural enemies the woodpeckers and titmouse.

In Prussia at one time sparrows were thought destructive to wheat and the authorities ordered the peasants to kill as many birds as possible. The result was so destructive to wheat fields—owing to the rapid increase of injurious insects—that the third year the sparrows were protected by law and all further killing of them was prohibited.

Wilson Flagg, one of the most accurate of American ornithologists, says that forest tracts in Virginia and Carolina were stripped of leaves by a borer of the beetle family. These beetles had been allowed to increase by a warfare waged upon their natural destroyers the woodpeckers.

It is but a short time since we saw an article in a local paper saying: "Bluejays will raid the vineyard and steal every grape if let alone. He will perch upon the boughs of the fruit tree and stick his bill into the most luscious fruits and what he cannot eat or carry away he will spoil by nibbling. He will eat more acorns than a hog, steal into the chicken coops and suck the eggs and then as if in contempt fly upon the clothes drying in the sun and wipe his dirty bill upon the clean sheets. If you succeed in killing one a hundred strangers come to attend his funeral and supply his place." It will be seen that the writer gave only the bad qualities of the jay and said nothing of insects that he destroys. Audubon says two blue jays and five young require in 100 days fully 20,000 insects.

Bradley, the English naturalist, writes that in one day he counted 500 caterpillars brought to a swallow's nest and that a pair of swallows will destroy in a single week 3,300 caterpillars. As the young birds are fed for four weeks this would give 13,440 insects, but as the old birds and their young continue to live largely upon caterpillars till they migrate from the colder to warmer climes it is calculated that in a single season they devour many more than this of these insects.

The crow, on other hand, though he eats many in-

sects he devours the eggs and the young birds of species that are beneficial, and E. A. Samuels calculates that a single crow in one season kills young birds that would devour in that year ninety-six times as many injurious insects as the crow itself would eat. Yet the crow has his friends and the eccentric John Randall would not permit one to be killed upon his farm for he believed that they did more good than harm.

Careful observers have ascertained that the robin, considered by many farmers in this State injurious, is really beneficial 142½ days during the year, even in the East where the cold of winter kills most of the injurious insects. Here the number of days he would be beneficial is greater than in colder lands. Mr. Samuels watched two robins and in a single hour they brought fifty-one cut worms to their nest.

In a late issue of the San Francisco *Chronicle* there is an article claiming the lark to be injurious and that farmers ought to wage war upon this bird. A recent government report, however, made by competent naturalists, states that a careful examination was made of thirty larks' stomachs, when it was found they contained 100 seeds, 25 caterpillars, 57 grasshoppers and 80 beetles. When the amount of damage that could be done by these insects and their rapidly increasing progeny is considered it will be seen that the lark is the farmer's friend.

A well known fruit grower in this part of the country has a standing reward for the woodpecker known as the sap sucker. He, like others, asserts that it girdles the trees and does much damage. A careful examination of its food shows it to live almost entirely upon beetles, ants and borers.

Several Placer county growers waged war upon the woodpeckers, asserting that the bird devoured their apples. A gentleman who knew their habits declared that the birds attacked only the wormy apples that were not worth saving and at the same time killed the insects that would rapidly increase if it were not for the birds. When he offered twenty dollars for a sound apple that had been attacked by the woodpecker no one claimed the reward.

A pair of road runners in a single season will destroy multiplied thousands of noxious insects and these birds are of incalculable benefit to farmers and fruit growers.

The tall blue herons kill so many gophers on the bottom lands along Feather river that D. N. Friesleben and J. S. Hutchins will not allow anyone to shoot these birds on their ranches.

Nearly every boy believes he is doing just right in shooting hawks, yet each hawk in one season will destroy thousands of field mice, rats, lizards, snakes and beetles.

Owls feed upon myriads of night-flying moths and beetles, keep the field mice down and lessen the number of rats. I read lately that in Norway and Sweden the entire mountain vegetation would in a few years be utterly destroyed by rats were it not for their destruction by their natural enemies the hawks, owls and foxes.

The pewee, flycatcher and titmouse are all insect-eating birds. The wren is a ravenous devourer of cut worms and other destructive insects. The bright little bluebird clears the ground each year of thousands of codlin moths and canker worms. Neither the blackbird nor crow care as much for wheat or corn as they do for grubs. The robins, the orioles and the bluejays all do the farmer and the fruit grower untold good. The nuthatch and the little gray creeper live exclusively on tree insects. Even the destructive butcher bird kills great numbers of beetles and locusts. Unless your attention has been called to the matter you may not realize how much damage insects do to fruit. The strawberry borer which plays sad havoc with the strawberry plants also kills the terminal buds of the peach and in some portions of this State half the peach crop has been killed by this single insect.

The twig borer, a small chestnut-colored beetle, does much damage to young fruit. The woolly aphis is the most persistent enemy of the apple while the codlin moth, the peach root borer, the sun scald beetle, the striped squash beetle, the red spider, the flat head borer, the pear slug, the army worm and grasshopper do immense damage to fruit trees, vines and grain.

Talking with Mr. Hatch, the noted fruit grower, lately, he told me that in one season the grasshopper ate down for him and others near Lodi nearly 500 acres of young almond trees. It is quite important to know the beneficial from the injurious birds. Caution the children never to kill a hummingbird which is not a honey seeker but an insect eater. Teach them that we have in the United States more than 500 species of birds that live almost entirely upon insects. Hunt up the facts and show children the value to man of sparrow hawks, martins, nighthawks, cranes, bluebirds and swallows. If boys must wage warfare upon birds let it be done upon insects. English sparrows and magpies and not upon birds that are beneficial. Show them that birds are absolutely needed to keep down the enormous number of insects that would soon devour every green thing upon the earth were it not for their destruction in vast numbers by their natural enemies, the birds.—Oroville Register.

THE HOME CIRCLE.

In the Homestead Barn.

In that summer morn, how fair the hours flew,
Mid billows of blossomed hay,
In a barn we knew, where the light stole
through,
A fresco of roof-chinks gray!
The shadowy distances, magnified,
To our wondering eyes seemed vast;
There we loved to hide from the world out-
side,
When our sunny plays were past.
Half lost in the hay we would laugh and leap,
Then weary still we would lie
And languidly keep a sweet truce with sleep
While the afternoon went by.
'Twas cool and quiet and deep as a thought
Ungussed in mind of a child,
With rich hues inwrought and rare odors
caught
From clover and lilies wild.
There the pigeons murmured in tender strain
Unseen, in some sheltered nook,
Until we were fain to listen again,
To hush and listen and look.
The barn-swallow strayed not farther from
care,
Than we in those far-off days,
Or the bee lured there by such peerless fare
Mistaken for meadow ways.
No traveler will find such a resting place,
Though the quest be summer-long;
No such dreaming-place can a poet trace,
Wherein to fashion a song!

—Ellerton.

My Own.

Brown heads and gold around my knee
Dispute in eager play;
Sweet, childish voices in my ear
Are sounding all the day.
Yet, sometimes in a sudden hush,
I seem to hear a tone
Such as my little boy's had been
If I had kept my own.
And when oft times they come to me,
As evening hours grow long,
And beg me winningly to give
A story or a song,
I see a pair of star-bright eyes
Among the others shine—
The eyes of him who ne'er has heard
Story or song of mine.
At night I go my rounds and pause
Each white-draped cot beside,
And note how flushed is this one's cheek,
How that one's curls lie wide;
And to a corner tenantless
My swift thoughts fly apace—
That would have been, if he had lived,
My other darling's place.
The years go fast: my children soon,
Within the world of men,
Will find their work and venture forth,
Not to return again.
But there is one who cannot go—
I shall not be alone;
The little boy who never lived
Will always be my own.

—Mary W. Plummer.

Estelle's Christmas Punishment.

"Nice old fellow!" said Estelle
Priestly, as she leaned wearily among
the cushions and looked into the eyes
of Pierce, who stood beside her. "You
don't know it, Pierce, but I'm awfully
glad you can't talk. If you could go
on to me as Aunt Maria does, positively,
I think I should hate you, because, you
being only a dog, I don't suppose it
would be very wicked to hate you if I
wanted to."

Pierce lifted his great, intelligent
eyes to her face, and looked grave. It
is possible he understood more of the
talk than Estelle gave him credit for;
and it is perhaps barely possible that
he thought the morality of even such
hating doubtful. Something in his eyes
made Estelle lean forward and pat his
splendid head, as she said tenderly:

"You needn't be so afraid, dear old
fellow; I shall never hate you, and you
will never talk any language but that
which I love. We are friends forever,
you and I."

Five minutes after she was tired of
him, and asked to have him let out of
the room. The truth was, Estelle was
too weak to interest herself in anything
for a great length of time. Magazines
full of choice pictures lay at her feet,
and one was in her lap—new magazines
which she had expected would last for
a long time, and already she felt like
throwing them from her. Everybody
in the house was busy, and she was left
almost entirely to her own resources,
which this morning were slight.

"Oh, hum!" she said at last with a
weary yawn. "This day is fifty hours
long, I believe. Just to think that it

lacks only three days to Christmas, and
everybody but me getting ready for it;
and I sitting here with pillows at my
back! And then to think that it is my
own fault! Oh! dear me."

She was talking aloud, as her fashion
was, and believed herself to be quite
alone, but Aunt Maria had entered the
next room a few minutes before and
heard the words. She came to the
door now and looked in.

"Yes," she said, pressing her thin
lips together in a way which for some
reason particularly annoyed Estelle.
"That is the worst part of it. I am sure
I am glad you are coming to your senses,
and begin to feel it. I told your mother
that if something could be done to make
you feel that this sickness, and the
trouble which it has brought upon us
all, is all your own fault, it would be
the best thing that could happen to
you. Just think! if you hadn't been so
headstrong the other day, and per-
sisted in going against my express
directions, you might have been getting
ready for Uncle Robert's this minute,
instead of being unable to leave your
chair."

The tears which had been gathering
under Estelle's closed lids before her
aunt began to speak were suddenly
dried, and her eyes flashed as they had
not since her illness. "I don't think
you need come creeping into the room
and listen to what I say to myself. At
least, my thoughts are my own, I sup-
pose; and it is being no better than a
thief to try to steal them. I was not
talking to you by any means, and I
don't want to think anything that you
suggest."

"Hoity, toity! we are getting well
too fast, I think. No need for your
mother to lie awake and worry because
you are not growing strong. Anybody
who can fly into such a passion as that,
and accuse her own aunt of stealing,
just because I am in the next room do-
ing up the work, and can't help hearing
her, must have a good deal of strength.
I advise you to be careful, Miss Estelle;
your father wouldn't approve of such
talk as that to me, even if you are sick.
If I should tell him about it, you would
have trouble laid up for you; and like
as not I will. I can't stand every-
thing."

"Tell him right away, if you want
to; you are just hateful enough to try
to make more trouble for everybody.
You would have been glad if I had
died, I believe; you would have said it
served me right. I wish you would go
away and let me alone; you make me feel
hateful all over."

Then the poor, naughty girl burst in-
to tears and sobbed away what little
strength she had, and had to be put to
bed and have her mother sit beside her
bathing her hot temples and hushing
her into quiet. Poor Estelle! she had
not learned to control her temper when
well, and found it now too much for her
feeble strength. She was having a
hard time. Six weeks ago—the day
her father and mother went to town
for the day, and her aunt Maria came
to keep house—was when the trouble
came. Estelle had permission to go
with her dear friend, Hattie Dunlap,
and the entire Dunlap family, on a ride
of eight miles, to be followed by a
nutting frolic, and a dinner on the way.

"You are sure Mr. Dunlap is go-
ing?" her father had asked, and
Estelle had replied promptly, "Oh!
yes, sir; Hattie told me last night that
her father said he was as pleased at the
idea of a nutting frolic as though he
were a boy again."

"And they are going to drive the
brown horses?" chimed in Estelle's
mother. Estelle had explained that
the gray horses of which her mother
was afraid were to be in town with
Ralph Dunlap, and because of these
things, permission had been given her
to go.

Father and mother had not been gone
an hour when Hattie Dunlap came for
Estelle, and in the course of a few
minutes' conversation which she had
with Aunt Maria, made it known that
"father" had lost the frolic after all—
having had a telegram which would
take him to town, and that Ralph was
going to drive and to take his own gray
ponies. Then Aunt Maria had risen in

her authority and insisted that Estelle
must not go. Her father had as good
as said that he gave permission because
Mr. Dunlap was going, and because the
gray horses were not. Hattie argued
excitedly that Ralph was as good a
driver as his father, and that it was
absurd to be afraid of those gray horses;
he drove them everywhere. Aunt
Maria was firm, but so was Estelle;
father had said she could go, and she
was certainly going. Go she did, and
came home lying on a bed on the floor
of a wagon, with the doctor holding her
head, and Mrs. Dunlap bending over
her in a fever of anxiety. The gray
horses, though generally under Ralph's
control, had grown frightened at a
strange-looking machine which was
coming down the road, and had tried to
run away from it. Both Hattie and
Estelle were thrown, but in was Estelle
who was hurt. Hattie escaped with a
few bruises. Estelle, on the contrary,
barely escaped with her life, and a long,
hard illness had followed, from which
she was now slowly, very slowly, creep-
ing back to health. Ever since she had
been pronounced out of danger Aunt
Maria had been anxious that she should
be reminded that she brought all the
trouble on herself, but father and
mother Priestly had forbidden any
talk about it until their daughter was
stronger.

They did not fully understand the
cause of this severe attack of headache,
for Aunt Maria had grimly told her
own words, with not a hint of Estelle's
reply. It was not until the evening
of that same day, when the pain had
spent itself, that Estelle, with her hand
in her mother's, whispered out her
sorrow.

"O, mamma! I never can be good, I
am sure. I have resolved and resolved
since I have been sick, and here I
blazed out at Aunt Maria this morning
just dreadfully. She said she would
tell papa, and I should think she would.
I pretty near called her a thief, and I
was awful. O, mamma, mamma! what
shall I do? I can't help being bad
when Aunt Maria speaks to me."

Mother Priestly talked then, as some
mothers know how to do; talked to such
purpose that Estelle of her own accord
said: "Mamma I know what to do next.
I must ask Aunt Maria to forgive me.
I hate to! I want her to forgive me,
but I hate to ask her, because she will
be sure to say something which will
make me feel mad inside; but I mean to
do it. Mamma, why cannot sisters be
a little bit alike? If Aunt Maria was
only like you!"

The forgiveness was asked the very
next morning; and Aunt Maria said: "I
thought, my lady, that your father
would bring you to your senses." And
Estelle answered not a word.

She was quite and sad all that day.
She had made a sacrifice. Mother and
father were going to Uncle Robert's
for the Christmas dinner, just as had
been planned long before, and Estelle
was to have Nurse Wade stay with her.
She had arranged it herself, and in-
sisted upon her mother going; but it
was a doleful Christmas to look for-
ward to, for all that. It was not until
Christmas morning that she knew
better.

"We thought it would excite you too
much, dear, to tell you before," her
mother said, "but we planned two
weeks ago to have the Christmas din-
ner come to us. Uncle Robert and
all the others and Aunt Kate and the
baby are coming; and the doctor says
if you will be very careful and quite,
you may sit in the wheel chair in the
dining room and enjoy them all. Did
mother's little girl think mother would
leave her for a Christmas alone?"

On Estelle's table at her side ticked
a tiny gold watch, her Christmas gift
from father and mother. Estelle
privately thought that she did
not deserve the gift. One thing she
asked her father which made him
smile and brush away a tear. Two
things she wanted graven inside the
watch cover: "Estelle's Christmas
Punishment," and "As one whom his
mother comforteth."

"Papa, I want it very much," she
said earnestly. "I am sure nothing
could punish me like that dear little

lovely, beautiful gift after I have been
so wrong; and, papa, nobody can tell
how mamma helped and comforted me,
and showed me what to do when my
heart was broken."

Estelle had another "punishment"
that very day. What was Aunt Maria's
gift but a wonderful little gray pony
with a side saddle on! He had to be
led to the dining room window for Es-
telle to give him a lump of sugar with
her own hand. "And he won't run
away, neither, for any kind of a ma-
chine," said Aunt Maria grimly; "I've
had him well broke."—F. A. Power, in
the Pansy.

Gems of Thought.

But surely modesty never hurt any
cause, and the confidence of man seems
to me to be much like the wrath of
man.—Tillotson.

Light as a gossamer is the circum-
stance which can bring enjoyment to a
conscience which is not its own accuser.
—W. Carleton.

I am very sensible how much nobler
it is to place the reward of virtue in
the silent approbation of one's own
breast than in the applause of the
world.—Melmoth.

And suddenly there was with the
angel a multitude of the heavenly army,
praising God, and saying: "Glory to
God in the highest; and on earth peace
to men of good will."—Luke ii.

He that will often put eternity and
the world before him, and who will dare
to look steadfastly at both of them, will
find that the more often he contem-
plates them, the former will grow
greater and the latter less.—Colton.

I have very long entertained an am-
bition to make the word wife the most
agreeable and delightful word in
nature. If it be not so in itself, all the
wiser part of mankind, from the begin-
ning of the world to this day, has con-
sented in an error.—Sir R. Steele.

There is a great measure of dis-
cretion to be used in the performance
of confession, so that you neither omit
it when your own heart may tell you
that there is something amiss, nor
over-scrupulously pursue it when you
are not conscious to yourself of notable
failings.—Jeremy Taylor.

Economy is the parent of integrity,
of liberty and of ease; and the beau-
tiful sister of temperance, of cheer-
fulness and of health; and profuseness is
a cruel and crafty demon that gradu-
ally involves her followers in depend-
ence and debts; that is, fetters them
with "irons that enter into their
souls."—Dr. Johnson.

The felicity and beatitude that glit-
ters in virtue shines throughout all her
apartments and avenues, even to the
first entry, and utmost pale and limits.
Now, of all the benefits that virtue
confers upon us, the contempt of death
is one of the greatest, as the means
that accommodates human life with a
soft and easy tranquility, and gives us
a pure and pleasant taste of living,
without which all other pleasure would
be extinct; which is the reason why all
the rules by which we are to live center
and concur in this one article.—Mon-
taigne.

Awarded
Highest Honors—World's Fair.

DR.
PRICE'S
CREAM
BAKING
POWDER
MOST PERFECT MADE.
A pure Grape Cream of Tartar Powder. Free
from Ammonia, Alum or any other adulterant.
40 YEARS THE STANDARD.

A Good Wife.

Bill Nye's joking columns are somewhat monotonous at times, but here is a screed from him that appeals to the heart of every male biped:

"My ideal wife is a comrade who wins me from down town, and who agrees with me generally, and if not, it is quite likely to be because I am wrong. She is one who has repeatedly proved that her impressions are better than the expensive opinions of my attorney.

"She sees where danger lies, while I am groping about, by means of cumbersome logic, to arrive later at the same conclusion.

"She does not claim to be literary, but discovers at once when an author becomes artificial and writes from the head rather than the heart.

"She is level-headed, rather than strong-minded. She knows when to applaud her husband without making a goose of him, and how to criticise without offending him.

"She delights in benefiting the needy, whom she knows, rather than make blanc mange for the people on the upper Congo. She does not say kind words by long-distance telephone, but anticipates the wants of the deserv-ing in her own neighborhood.

"She can give pointers to a professional cook, and compels good service because she is familiar with all the details of good housekeeping.

"She can transact business when an emergency arises, but is glad to turn it over to the husband when he is at hand.

"The ideal wife is also an ideal mother. She has no abnormal affection for wheezy dogs.

"She is a good fellow with her husband, and the confidante and comrade of her sons and daughters.

"She reveres the honest elements of religion without being a beggar or a hustler for the church. She does not neglect her home or her children in order to wipe out a church debt, which should not have been incurred.

"She is the kind of woman to encourage wedlock by her glorious example. She is the kind to make confirmed bachelors and old maids pity themselves.

"Finally, she compels her husband to congratulate himself, and to wonder what he would have been without her.

"She is unselfish. She is healthy in mind and body, and she is the mother of good citizens. She makes the world better for having lived in it, and of such is the kingdom of heaven."

Hanging Pictures.

By hanging pictures low you increase the apparent height of a room.

Colored pictures should not be hung in hallways or on staircases unless there is plenty of light for them. In such places, strong photographs, engravings and drawings in black and white go best.

A picture should not be hung from one nail; the diagonal lines formed by the cord have a very discordant effect. Two nails and two vertical cords, or, what is far more safe, pieces of wire cordage, should be used instead of the single cord.

Picture cord should be as near the color of the wall upon which they are put as possible, so that they may be but little seen. When one picture is hung beneath another the bottom one should be hung from the one above, and not from the top; we thus avoid multiplying the cords, which is always objectionable.

A good hue for walls where prints or photographs are to be hung is a rich yellow brown, or a leather color. Luster to the black of the print or the tone of the photograph is thus imparted.

The wall paper should have no strongly defined pattern, and should be of one uniform color, such as red inclining to crimson or tea green.

The center of the picture, as a rule, should not be much above the level of the eye.—Art Amateur.

The Farmer's Boy.

Has wide-open eyes.
Is mirthful and jolly.
Gets up with the sun.
Is generous and kind.
Is truthful and square.
Has a voice like a bell.
Is not vulgar or coarse.
Grumbles hardly at all.
Likes to frolic and play.
Is prompt and obedient.
Is always ready to help.
Is his mother's chief joy.
Has clean hands and face.
Is his sister's great chum.
Has a mind like a sponge.
Thinks his father is great.
Is near the head of his class.
Seldom whimpers or whines.
Never loafs at the "corners."
Keeps himself tidy and sleek.
Wants to grow up a true man.
Often asks the wherefore and why.
Says "I thank you" and "Please, sir."
And grows like a turnip in June.

The Farmer's Girl.

Is honest.
Is sensible.
Is not saucy.
Is contented.
Helps mother.
Is thoughtful.
Is wide-awake.
Is always polite.
Amuses the baby.
Is always pleasant.
Is gentle and kind.
Does her work well.
Is careful in speech.
Keeps her dress neat.
Never neglects duty.
Learns her lessons well.
Always speaks the truth.
Makes father comfortable.
Is respectful to old people.
Teaches little brother and sister.
Tries to be in word and deed a true little woman.

Needlework should be ironed on the wrong side on a piece of flannel, and it should be kept long enough under the iron to thoroughly dry it.

DOMESTIC ECONOMY.

Kitchen Lore.

BOSTON PUDDING.—Peel a dozen and a half of apples, core and cut them into small pieces and put them into a small saucepan that will just hold them, with a little water, a little cinnamon, two cloves and the peel of one lemon. Stev over a slow fire till quite soft; then sweeten with sugar and pass it through a sieve. Add to it the yolks of four eggs and the white of one, one-quarter of a pound of butter, half a nutmeg, the grated peel and juice of one lemon. Beat all well together. Line the inside of a pie dish with good puff paste, put in the pudding and bake it.

TURKEY STUFFED WITH CHESTNUTS.—Draw, singe, pare and truss a young turkey. Chop up ten ounces of kernel of veal and sixteen ounces of pig's leaf lard, both to be chopped separately, then mixed together; season with salt and spice, adding a little shallot and the liver, both well chopped. Put this into a mortar with a gill of stock and pound well, remove and place in a *sautoir* to cook for fifteen minutes; let cool, and stir in sixty cooked chestnuts; stuff the turkey with this, roast, dress, and pour over it a little good gravy.

TURKEY TRUFFLED AND GARNISHED WITH BLACK OLIVES.—Take a fine, fat, tender turkey, weighing about eight or ten pounds; truffle it three days before using with two pounds of leaf lard, three bay leaves, thyme, salt, pepper, a very little crushed and chopped garlic, and two chopped-up shallots. Peel three pounds of truffles, chop up the parings, and place all together in a vessel, cutting the large truffles in pieces. Strain the melted lard over these and let get cold, stirring the whole well together with a gill of brandy, and season. Fill up the turkey with this, and insert a slice of thin fat pork between the breast and skin; place on this fat pork slices of truffle. Truss for roasting and wrap in buttered paper and cook for an hour and a half or two hours, on a cradle spit, basting frequently. Unwrap it fifteen minutes before serving; salt and let acquire a good color. Dress on a long

dish, garnish around with black olives, and serve separately some clear gravy, taken from the drippings, well skimmed and strained.

TURKEY WITH WHITE OYSTER SAUCE. Truss an eight-pound turkey, put it into a saucepan, moisten to cover and two inches higher with stock and let boil. Skim, season with salt, whole peppers and a bunch of parsley garnished with bay leaves: boil this slowly until thoroughly cooked. When done, drain, untruss and dress on an oval rice border. Serve with a white sauce containing small, lightly blanched and well drained oysters and raw fine herbs. A part of the sauce should be poured over the turkey and the remainder served in a sauce boat.

Hints to Housekeepers.

Milk which is turned or changed may be sweetened or rendered fit for use again by a little soda being stirred in it.

When the burners of lamps become clogged with char, put them in strong soapsuds and boil awhile to clean them.

It is said that a pinch of salt placed on the tongue and allowed to dissolve slowly is a certain cure for sick headache.

The creases can be taken out of velvet and the pile raised by drawing it across a hot iron over which a wet cloth has been spread. If there are pin marks over which the pile refuses to rise, brush it up with a stiff brush and steam it, repeating the operation several times.

Women cannot be too cautious in the use of face lotions or powders. Recent chemical analyses of hair dyes and cosmetics show an appalling lack of conscience in their ingredients. Out of many samples examined at official laboratories, not one was free from lead. Of thirteen samples of face lotions, ten were found to contain corrosive sublimate. Harmless lotions were merely soap, borax, citric acid, calomel, alcohol and water. It is wisdom on the part of any woman to ignore all so-called "skin rejuvenators," and cling to nature's free gifts of water, sun and fresh air, with perhaps a slight massage every night.

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BECAUSE inferior and cheaper made baking preparations are sold at wholesale at a price so much lower than ROYAL, some grocers are urging consumers to buy them in place of the ROYAL at the same retail price.

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It is still more important, however, that ROYAL BAKING POWDER is purer and more wholesome and makes better, finer, and more healthful food than any other baking powder or preparation.

Coast Industrial Notes.

—The past twelve months made a meager year in the annals of railroad building. The total new mileage was 1919.13. Of this, Arizona contributed 193.49, and California 32.2.

—Expert Moore figures that the Santa Fe system must expend \$4,000,000 within the next five years to keep up its road and rolling stock. Of this amount the A. & P. will have to expend \$2,380,000—\$1,705,200 for new rails.

—The Pacific Coast Lumber Company and the Puget Sound Shingle Company, of Tacoma, are in the hands of a receiver. The liabilities of the former will reach nearly \$35,000 and the latter about \$12,000.

—The Mexican Northern railroad is to be extended from Sierra Mojada to the rich mining camp of Carmen on the Rio Grande border, and thence across Presidio county, Tex., to Marathon, where connection will be made with the Southern Pacific.

—The San Diego, Pacific and Eastern Railroad Company has incorporated. Capital stock \$1,000,000. The object of the incorporation is to build a railroad from San Diego northeastward through El Cajon valley and to San Felipe pass, with a diverting road also from El Cajon valley via Poway to Escondido.

—Capital has been secured for carrying out the plans for car works, blast furnace and steel works at Salmon bay, Puget Sound. D. H. Gilman of Seattle is at the head of the enterprise. It will require \$3,000,000 of capital and give employment to 3000 men. It is proposed to secure motive power by generating electricity at Snoqualmie Falls, and a company already has been organized for this purpose.

—There are two values in flax—fiber and the seed. Our Northwest Pacific States are the best flax-growing district in the world. Many years ago the fiber was extolled by experts who saw it. But we were distant from market and did not press this branch of industry. Conditions are changing now, and the products of flax, fiber and seed or oil, will now or soon bear transport. This is one of the industries to be studied in these States.

The proposed new system of water works for Astoria, Or., will cost when completed the sum of \$200,000. It will have a gravity system of eighteen inch pipe, twelve miles long, a 6,000,000 gallon reservoir, a masonry lined tunnel 1,200 feet long, aerating foundation seventy-five feet in height, and discharging 2800 gallons a minute; also a power plant driving a dynamo for public lighting. The power is developed by the fall of the gravity system of over 600 feet.

—A big irrigation scheme in southern California is known as the Columbian Colonization Company, with a capital stock of \$4,000,000. J. G. Foster, representing foreign capital, is in San Bernardino perfecting some of the minor details preliminary to beginning work on the construction of a dam at Victor, which will impound sufficient water to irrigate 350,000 acres of land. The Santa Fe road passes through the land, and the whole can be brought under cultivation at comparatively little cost. The parties interested are the principal owners of the Bear Valley Irrigation Company.

—The Monterey & Fresno Railroad is designed to afford direct railroad transportation from Fresno to Monterey. Preliminary surveys have been made for the entire line—171 miles—and the permanent location of the greater part of the route has been completed. In July last, forty-six miles, from Monterey bay east, were put under contract and work on this division is progressing, with nine miles now graded ready for the track. The line will pass through Salinas, San Juan, Hollister, Firebaugh and Madera. It is expected to push work vigorously during 1895.

—The biennial report of the State Board of Fish Commissioners for 1893-4 states that California ranks sixth in the Union, with products valued at \$1,044,310 with an annual appropriation of \$8750, while Massachusetts ranks first, with an appropriation of \$15,700 per annum. It has been stated that Eastern States required greater appropriations in this direction on account of greater population, but the report says the reverse is true, as the expense of protection is almost nothing in densely populated regions. The Commission recommends the appointment of a game warden in each county.

The long-talked-of electric railroad between Los Angeles and Santa Monica is rapidly approaching materialization. The plan is the utilization of the old Los Angeles and Pacific Railroad by a corporation, which is understood to be practically the same as the Los Angeles Consolidated Company. A contract of sale has been signed by the owners of the old Los Angeles and Pacific whereby, on certain terms, they transfer all the property to Mr. Stevens of this city, who is operating in behalf of the Los Angeles and Pasadena Electric Railway Company, which is part of the Consolidated, the object being to make a continuous line through Los Angeles from the mountains to the sea.

—The Pacific Northwest can now boast of having the longest telephone line in the world. The Sunset Telephone company has put in operation a system of lines throughout the lower Sound country as far as the mouth of the Fraser river, reaching from Seattle to New Westminster, Vancouver, points on the Fraser river as far as Ladner's Landing, Blaine, Anacortes, Fairhaven, LaConner, Marysville and intermediate points. This completes a continuous line about 1,300 miles long, beginning at Moscow, Idaho, running thence through Spokane, eastern Washington, eastern Oregon, along the Columbia river to Portland, thence through western Washington and down Puget Sound to Ladner's Landing.

—The San Francisco and Los Angeles Railroad has been incorporated again. The incor-

porators are: Frederick Homer, W. H. C. Fowler, W. H. Martin, W. J. Behan and A. Judson. The road is designed to run through Alameda, Contra Costa, San Joaquin, Stanislaus, Merced, Madera, Fresno, Tulare, Kern and Los Angeles counties, and will be about 500 miles in length. The capital stock is placed at \$20,000,000 and \$500,000 of that amount has been subscribed, ten per cent of which has been paid into the hands of the treasurer of the company, A. Judson. Mr. Homer, who has had charge of the enterprise from the start, takes \$450,000 of the stock as trustee, and says that he represents Eastern capitalists who are behind the enterprise.

—The Columbian Colonization Company is incorporated by J. W. Wilson, H. P. Sweet and J. G. Foster to irrigate and colonize a tract of government land in San Bernardino county, on the Atlantic & Pacific and the Southern California Railroads, and on branches of the Santa Fe system. At the upper narrows at Victor on the Southern California Railway, the river flows through a gorge 300 feet deep and 150 feet wide. By building a dam 150 feet high at this point the company propose to obtain a water supply sufficient to irrigate 340,000 acres of desert land. It is their intention to lay out a city to be called Columbia, with water power for electric plants, a beet sugar factory, canaigre works, a creamery and a cold-storage warehouse. The capital stock is \$4,000,000.

—It is stated at Union Pacific headquarters that for some time past it has been the ambition of Receiver McNeill of the O. R. & N. Co. to bring about a separate receivership for the Oregon Short Line and Utah Northern with the Oregon Navigation Company, thereby making the two roads an independent system. But the scheme was not to end there. A California line was to be secured by extending the branch a distance of 400 miles, connecting the O. R. & N. Co., thus giving the company a through line from Huntington to the coast via Portland. For months this has been the dream of Major McNeill, but when he broached the subject of independent line to Mr. Boissevan, who has large interests in both properties, it is understood that gentleman told the Navigation Company's receiver he was entirely satisfied to have the management in the control of the Union Pacific.

A conservative epitome of California productions in '94 show that California mines yielded \$18,000,000 in the preceding twelve months, of which over \$12,000,000 was gold; the value of the salt product in 1894 was \$120,000; borax product, 1894, \$860,000; mineral waters, \$300,000; natural gas, \$60,000; petroleum and bitumen products, \$1,250,000; quicksilver, 26,400 flasks; value of San Francisco manufactures in 1894, \$83,310,000; beet sugar produced, 35,000,000 pounds; wheat crop, 22,414,900 bushels; brandy distilled from grapes, 1,300,000 gallons; California canned fruit, 1,240,000 cases; barley crop, 5,060,000 bushels; bean crop, 72,000,000 pounds; raisin crop, 54,600,000 pounds; dried fruit product, 125,000,000 pounds; prune crop, 32,500,000 pounds; wool product, 26,000,000 pounds; hop product, 40,000 bales; orange crop, 10,000 carloads; butter, 50,000,000 pounds; cheese, 15,000,000 pounds.

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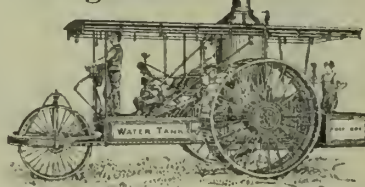


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Orange Culture in California.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thomas A. Garry of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent, postpaid, at the reduced price of 75 cents per copy, in cloth binding. Address THE PACIFIC RURAL PRESS, 220 Market Street, San Francisco, Cal.

Four Hundred Degrees Below Zero.

Four hundred and twenty-four degrees Fahrenheit below zero! Just what this means it is almost impossible to imagine, and yet it is one of the temperatures which have been reached and used in laboratory research, and has been made the subject of some highly interesting experiments and explanations by Prof. Dewar before the British Royal Institution. Four hundred degrees below zero is not an everyday temperature, nor can it be reached by more every-day means than the expansion of liquid air, which latter Prof. Dewar has succeeded in producing in comparatively large quantities, and in storing by novel and ingenious methods, to be used as required in the study of matter at abnormally low temperature, exactly as a spirit lamp or a Bunsen burner is used in studying the properties of different bodies at the higher temperatures.

The tensile strength of iron at 400 degrees below zero is just twice what it is at 60 degrees above. It will take a strain of sixty instead of thirty tons to the square inch, and equally curious results have come out as to the elongation of metals under these conditions. It was an idea of Faraday that the magnetism in a permanent magnet would be increased at very low temperatures, and experiments with comparatively low temperatures had rather negated Faraday's suggestion, but Prof. Dewar has completely verified the opinion of the famous savant, having shown that a magnet at the extremely low temperature made possible by the liquid air had its power increased by about 50 per cent. Very low temperature was shown also to have a remarkable effect upon the color of many bodies. For example, the brilliant scarlet of vermillion and mercuric iodide is reduced, under its influence to a pale orange, the original color returning with the rise of the temperature. Blues, on the other hand, are unaffected by cold, and the effect is comparatively small upon organic coloring in matters of all tints.—Cassier's Magazine.

The New Constituent of the Air.

Lord Rayleigh's curious discovery is that the gas obtained by taking vapor of water, carbonic acid, and oxygen from common air is denser by $\frac{2}{30}$ than nitrogen obtained by chemical processes from nitric oxide, or from nitrous oxide, or ammonium nitrite, thereby rendering it probable that atmospheric air is a mixture of nitrogen and a small proportion of some unknown and heavier gas. Rayleigh and Ramsey (who joined in the work at this stage) have since succeeded in isolating the new gas, both by removing nitrogen from common air by Cavendish's old process of passing electric sparks through it, and taking away the nitrous compounds thus produced by alkaline liquor; and by absorption by metallic magnesium. From this occurrence Lord Kelvin deduces "a fresh and most interesting verification of a statement which I took occasion to make in my presidential address to the British Association in 1871: 'Accurate and minute measurement seems to the non-scientific imagination a less lofty and dignified work than looking for something new. But nearly all the grandest discoveries of science have been but the rewards of accurate measurement and patient, long-continued labor in the minute sifting of numerical results.' The investigation of the new gas is now being carried on vigorously, and has already led to the wonderful conclusion that the gas does not combine with any other chemical substance which has hitherto been presented to it."

Armor Plate for Russia.

The Bethlehem, Pennsylvania, Iron Company has the whole contract for supplying armor for Russia's two new battle ships, the Sebastopol and Petropavlovsk. The contract calls for something over 12,000 tons of armor plate to fit up the two ships. It amounts to about \$4,000,000. The American com-

pany secured the contract over fourteen competitors, comprising the armor plate manufacturers in the United States, England, France, Italy and Germany. The contract is regarded the largest ever awarded in Europe.

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The reader of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly on the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials. Address, F. J. CHENEY & CO., Toledo, O.

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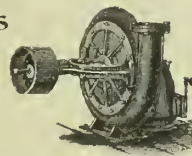
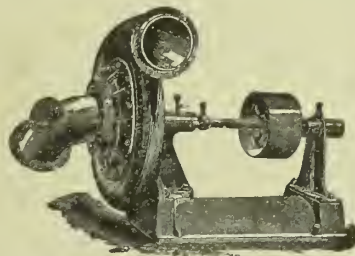
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Wages of Steamship Building.

The following report shows the rate of wages paid by Clyde builders of ocean steamships and by steamship owners, and are printed in Consular Reports. The rates given are by the hour:

Description.	Pence.	Dollars.
Engineers, general.....	6 1/2	\$0.13
Pattern makers.....	6 3/4	.13 1/2
Machinists, in engineer shop.....	6	.12
Boiler makers.....	8	.16
Plumbers.....	8	.16
Pipe fitters.....	6 1/2	.13 1/2
Shipwrights.....	7 1/2	.15
Ship joiners.....	7 1/2	.14 1/2
Drillers.....	8 1/2	.17
Fitters-up.....	9 1/2	.18 1/2
Riveters.....	10	.20
Calkers.....	9	.18
Painters.....	7 1/2	.15
Furnace men.....	6	.12
Sheet-iron workers, general.....	6 1/2	.13
Coppersmiths.....	7 3/4	.15 1/2
Iron molders.....	7 1/2	.15
Brass molders.....	8	.16
Blacksmiths.....	7 1/2	.15
Laborers.....	5	.10
Frame setters.....	8 1/2	.17

The hours of labor are fifty-four per week for about forty-eight weeks in the year. The ships are nearly all constructed of steel. Iron vessels are now as rarely built there as wooden ships. Several of the trades mentioned are employed by the piece. These include the riveters, platers, frame setters, fitters and calkers. The riveters work in squads, consisting of two riveters, a holder-on and a rivet boy, and they are paid at the rate of so much per hundred rivets put in. The larger the vessel the higher the rate, and special prices are paid for riveting keels and stringer plates. A steamer of over 5000 tons commands extra wages. On ordinary vessels good squads (two riveters, a holder-up and a rivet boy) will make at present about \$6.68 per day, but the average for Government work is above this. The piece men are sometimes irregular in their employment, and, if overtime is excluded, do not work more than five days per week.

The shipwrights have a standard wage of fifteen cents per hour, but the joiners, blacksmiths and engineers have what is known as a sliding scale.

In the case of engineers the pay varies from twelve to thirteen and a half cents per hour, blacksmiths from twelve to sixteen cents per hour.

War Craft of Samoa.

The skill and ingenuity displayed in making and finishing large Samoan canoes are something remarkable, for the reason that the planks are of such uneven lengths and widths and every part is fastened by fiber. Canoes for fishing outside the reefs are partially decked over at each end and ornamented with carving and shells. They are good sea boats and run close to the wind.

The war canoe, called an alia, is a double affair on the catamaran order. This is made by decking over two large canoes. On this platform is built a fort, formed of green coconut legs. This floating fort is pushed up close to the shore near some village or earthworks and a bombardment carried on from it against the enemy.

Many of the canoes are rigged with sails, which are frequently of ordinary sailcloth. The Samoan sail proper, however, is made of native mats sewed together, forming a triangle. The apex is fastened at the bottom of the canoe and one side made fast to the mast.

The natives construct a very ingenious temporary sail of coconut leaf by splitting the heavy rib down the center of the leaf and weaving the small leaflets together in the center. The two pieces of rib stiffen the outer edges of the sail, one side of which is tacked fast to the mast and the other lashed at the bottom to a projecting stick.—Outing.

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.....DEALERS IN.....

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Served in Two Wars.

THE GRIP ALMOST WON WHERE THE BULLET FAILED.

Our Sympathies Always Enlisted in the Armisties of the Veteran.

(From Shenandoah Herald, Woodstock, Va.)

The many friends of Mr. Levi McInturff, an old citizen of Woodstock, will be glad to hear of his improved condition, and of his remarkable recovery, after years of prostration and suffering.

Mr. McInturff always led a very active life, and served as a soldier in the Mexican war and also in the late war on the Confederate side. About four years ago he was attacked twice with the grip. The second attack left him in a condition of prostration and great nervousness. He was not able to grasp the handle of an axe, and could do no labor of any kind. He was unable to use knife and fork in eating. He could not close either hand. In endeavoring to walk, the least stumble would cause him to fall, and he was unable to walk to this place, a distance of one mile.

He was a great sufferer from pains in his hands, arms and feet. His condition was really pitiable and he was almost entirely confined to his home.

He consulted three efficient physicians, but they were not able to afford him relief. The old and reliable remedies to be found at our drug stores were tried, but there seemed to be no relief from his sufferings.

For four long years he suffered, and had he not been a man of remarkable will power and determination, the probability is that he would have yielded to the disease and have given up in despair.

Several months ago, he noticed in a paper which accidentally fell into his hands, an account of a remarkable cure which had been effected by the use of Dr. Williams' Pink Pills. He immediately ordered a box and commenced taking them. He says he was greatly relieved within three days time. The blood found its way to his fingers, and his hands, which had been palsied, assumed a natural color, and he was soon enabled to use his knife and fork at the table. He has recovered his strength to such an extent that he is enabled to chop wood, shock corn and do his regular work about his home. He now says he can not only walk to Woodstock, but can walk across the mountains. He is able to lift up a fifty-two-pound weight with one hand and says he does not know what Dr. Williams' Pink Pills have done for others, but knows they have done a great work for him.

He was in town last Monday, court day, and was loud in his praises of the medicine that had given him so great relief. He purchased another box and took it home with him. Mr. McInturff is willing to make affidavit to these facts.

The foregoing is but one of many wonderful cures that have been credited to Dr. Williams' Pink Pills for Pale People. Diseases which heretofore have been supposed to be incurable, such as locomotor ataxia and paralysis, succumb to this wonderful medicine as readily as the most trifling ailments.

Dr. Williams' Pink Pills are now manufactured by the Dr. Williams' Medicine Co., of Schenectady, N. Y., a firm of unquestionable reliability. Pink Pills are not looked upon as a patent medicine but rather as a prescription. They have been used as such in general practice for many years, and their success in curing various afflictions without any other medicines was so great that they were prepared in quantities and placed within the reach of every one. An analysis of their properties shows that they contain, in condensed form, all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are an unfailing specific for such diseases as locomotor ataxia, partial paralysis, St. Vitus' dance, sciatica, neuralgia, rheumatism, nervous headache, the after effects of la grippe, palpitation of the heart, pale and sallow complexion and the tired feeling resulting from nervous prostration, all diseases resulting from vitiated humors in the blood, such as scrofula, chronic erysipelas, etc. They are also a specific for troubles peculiar to females, such as suppressions, irregularities and all forms of weakness. They build up the blood, and restore the glow of health to pale and sallow cheeks. In men they effect a radical cure in all cases arising from mental worry, overwork or excesses of whatever nature.

Pink Pills are sold in boxes (never in loose form by the dozen or hundred, and the public are cautioned against numerous imitations sold in this shape) at 50 cents a box or six boxes for \$2.50, and may be had of all druggists, or direct by mail from Dr. Williams' Medicine Company.

How Thoughtful!

Captain Irons—You people had better take to the boats at once. I propose to stick to the ship.

Mrs. Giddy—Oh, captain, if you'll only get them to open the place where they put my husband's luggage, you can get a pair of rubbers to keep your feet from getting wet!—Fort Worth Gazette.

Breeder's Directory.

Six lines or less in this directory at 50c per line per month.

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F. H. BURKE, 626 Market St., S. F. A1 Prize Holsteins; Grade Milch Cows. Fine Pigs.

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WELLINGTON'S IMPROVED EGG FOOD for poultry. Every grocer and merchant keeps it.

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FRANK A. BRUSH,
SANTA ROSA, CAL. (Care Santa Rosa National Bank.) Importer, Breeder, Exporter.
S. C. White Leghorns,
S. C. Brown Leghorns,
Barred Plymouth Rocks,
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The Greatest Egg Producers and Hatching Place in the West
EGGS FOR HATCHING

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BY B. J. KENDALL, M. D.

Thirty-five fine engravings showing positions and actions of sick horses. Gives the cause, symptoms and the best treatment of diseases. Has a table giving the doses, effects and antidotes of all the principal medicines used for the horse and a few pages on the action and uses of medicines. Rules for telling the age of a horse, with a fine engraving of the teeth at each year. It is printed on fine paper and has nearly 100 pages. 7x5 inches. Price, only 25 cents, or five for \$1, on receipt of which we will send by mail to any address. Pacific Rural Press, 220 Market street, San Francisco.

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NILES' new manual and reference book on subjects connected with successful Poultry and Stock Raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated with handsome, lifelike illustrations of the different varieties of Poultry and Live Stock. Price, postpaid, 50 cents. Address: **PACIFIC RURAL PRESS** Office, San Francisco, Cal.

BERKSHIRES.

We received many compliments for our herd from visitors at the State Fair. We competed for 13 ribbons and won 11, as follows: 2 special; 2 sweepstakes; 8 firsts; 4 seconds.

We have a few Choice Pigs for sale.

SESSIONS & CO.,

P. O. Box 686. Los Angeles, Cal.

Genuine only with RED BALL brand.
Recommended by Goldsmith, Marvin, Gamble, Wells, Fargo & Co., etc., etc. It keeps Horses and Cattle healthy. Formic acid cures; it increases and enriches their milk.
Manhattan Food Co.,
San Mateo, Cal.

S. F. MARKET REPORT.

Market Review.

SAN FRANCISCO, Jan. 9, 1895.

FLOUR—We quote: Net cash prices for Family Extras, \$3 40@3 55 ¢ hbl; Bakers' Extras, \$3 30@3 40; Superfine, \$2 20@2 55 ¢ hbl.

WHEAT—Moderate demand prevails on export account, the quotable figure for standard shipping being 87½¢ ¢ cttl., with 88½¢ for something of fancy quality. There is customary trade in milling grades at a range of 92½@97½¢ ¢ cttl., the latter an extreme quotation. Arrivals of Walla Walla grain continue free at rather easy figures, say 75@76½¢ for fair average quality; 80@85¢ for blue stem and 70@72½¢ for damp.

BARLEY—The tone of the market remains of easy character, while business is slow and light. Until there be a clearing up of the weather, no change, either in trade or prices, is likely to occur. We quote: Feed, fair to good, 78½@80¢; choice, 81¼@82½¢; Brewing, 90@95¢ ¢ cttl.

OATS—The market is liberally stocked. Trade is very quiet, however, and buyers have the advantage. We quote: Milling, \$1@1 12½; Surprise, \$1 05@1 15; fancy feed, 97½¢@1 02½; good to choice, 87½@95¢; poor to fair, 80@85¢; Black, \$1 15@1 30; Red, \$1 12½@1 17½; Gray, 92½¢@1 ¢ cttl.

CORN—Offerings are of fair proportions and moderate trade is reported. Damp stock sells below quoted figures. Quotable at \$1 10@1 15 ¢ cttl. for large Yellow, \$1 20@1 22½ for small Yellow, and \$1 17½ to \$1 25 for White.

CRACKED CORN—Quotable at \$27@27 50 ¢ ton.

CORNMEAL—Millers quote feed at \$26 to \$26 50 ¢ ton; fine kinds for the table in large and small packages, 3@3½¢ ¢ lb.

OILCAKE MEAL—Quotable at \$30 ¢ ton from the mill.

COTTONSEED OILCAKE—Quotable at \$26@27 ¢ ton.

SEEDS—We quote as follows: Mustard, Brown, \$1 75@2; Yellow, \$2 40@2 45; Trieste, \$2 30@2 35; Canary, 3@4¢; Hemp, 3¼@4¢ ¢ lb; Rape, 1¼@2¼¢; Timothy, 5¼@6¼¢ ¢ lb; Alfalfa, 7¼@8¢ ¢ lb; Flax, \$2@2 25 ¢ cttl.

MIDDLINGS—Quotable at \$17 50@19 ¢ ton.

MILLSTUFFS—We quote: Rye Flour, 3½¢; Rye Meal, 3¢; Graham Flour, 3¢; Oatmeal, 4½¢; Oat Groats, 5¢; Cracked Wheat, 3½¢; Buckwheat Flour, 5¢; Pearl Barley, 4¼@4½¢ ¢ lb.

BRAN—Quotable at \$11 50@12 50 ¢ ton.

FEED—Manhattan Horse Food (Red Ball Brand) in 100-lb cabs, \$8; Manhattan Egg Food, 100-lb bags, \$11 50.

HAY—Prices are marked up all round, on account of the storm. The advance will probably be only temporary. Wire-bound Hay sells at \$1 ¢ ton less than rope-bound Hay. Following are the wholesale city prices for rope-bound Hay: Wheat, \$10@13; Wheat and Oat, \$10@12; Oat, \$9@12; Barley, \$9 50@11; Clover, \$9 50@11; compressed, \$10 50@12 50.

STRAW—Is higher, receipts being light. Quotable at 70@80¢ ¢ bale.

HOPS—It is calculated that about four-fifths of the crop of this coast has been bought or shipped, and the probabilities are that the market will be fairly well cleaned up in time for the new season. The Prices Current says: "Stagnation still exists in the Hop market, with no encouraging prospects of activity soon being experienced. Stocks now in store are largely of ordinary quality, choice to select being in scanty supply, and the latter would command the extreme quotation more readily than the most ordinary would sell at the inside figures." Quotable at 5@8¢ ¢ lb.

RYE—Quotable at 87½@95¢ ¢ cttl.

BUCKWHEAT—Quotable at 85@95¢ ¢ cttl.

GROUND BARLEY—Quotable at \$19@19 50 ¢ ton.

POTATOES—The rain limits supplies and there is firmer holding. We quote: Volunteer New Potatoes, 20 ¢ lb; Early Rose, 35@45¢; River Reds, 30@35¢; Burbanks, 35@50¢; Oregon Burbanks, 50@55¢; Salinas Burbanks, 75¢@81¢; Sweeties, 50@75 ¢ cttl.

ONIONS—Quotable at 50@70¢ ¢ cttl.

DRIED PEAS—We quote: Green, \$1 35@1 50; Niles, \$1 20@1 25 ¢ cttl.

BEANS—Good stock is steadily held, though business is far from being of active character. Liberal concessions are obtainable on wet and damaged stock. We quote as follows: Bayos, \$1 75@1 90; Butter, \$1 75@1 85 for small and \$1 90@2 for large; Pink, \$1 10@1 15; Red, \$1 60@1 75; Lima, \$4 10@4 25; Pea, \$2 25@2 50; Small White, \$2 25@2 55; Large White, \$2 10@2 30; Blackeye, \$2 75@3; Red Kidney, \$2 75@3; Horse, \$1 60@1 70 ¢ cttl.

VEGETABLES—Asparagus is cheaper, the inquiry being very small. Business generally, at the moment, is of dragging character. We quote as follows: Sacramento Asparagus, 8@12¢ ¢ lb; San Leandro Rhubarb, 50@60 ¢ box; Mushrooms, 6@10¢ ¢ lb. for common and 12½@20¢ for choice; Los Angeles Tomatoes, 75¢@1 25 ¢ box; String Beans, 3@5¢ for poor and 8@10¢ ¢ lb. for good stock; Green Peas, 6@9¢ ¢ lb; Marrowfat Squash, \$5@6 ¢ ton; Hubbard Squash, \$10 ¢ ton; Green Peppers, 3@5¢ ¢ lb; Turnips, 75¢ ¢ cttl; Beets, 75¢ ¢ sack; Parsnips, \$1 25 ¢ cttl; Carrots, feed, 35@40¢; Cabbage, 50@55¢; Garlic, 3@4¢ ¢ lb; Cauliflower, 60@70¢ ¢ dozen; Dry Peppers, 15@17¢ ¢ lb; Dry Okra, 12½@15¢ ¢ lb.

FRESH FRUIT—Very light demands. We quote as follows: Persimmons, 25@50¢ ¢ box; Apples, 30¢@1 ¢ box; Pears, 50@75¢ ¢ box.

CITRUS FRUIT—Supplies of Oranges are in excess of the demand, the weather being against trade. We quote as follows: California Navels, \$1 75@2 50; Seedlings, \$1@1 35 ¢ box; Sonora Oranges, \$1 50@1 75 ¢ box; Mexican Limes, \$3 50@4 ¢ box; California Limes, in small boxes, 50¢@75¢ ¢ box; Lemons, Sicily, \$4 50@5; California Lemons, \$1 50@2 for common and \$2 50@3 for good to choice; Bananas, \$1@2 ¢ bunch; Pine-apples \$4@6 ¢ dozen.

DRIED FRUIT—Values are somewhat nominal, as there is no representative business in progress. In discussing the situation Thomas' Produce Report says: "A conservative estimate of stocks of Peaches and Apricots remaining in the State at the present time places them at between 100 and 150 carloads of the former and about 350 carloads of the latter. Of the Peaches, the bulk will grade between Chinese bleached and choice, not many coming up to the last mentioned grade, and a very liberal quantity of the stock on hand will grade above that. About the middle or latter part of this month there should be a resumption of trade."

Following are the prices furnished by the Fruit Exchange:
Apricots—Fancy Moorpark, 8½¢; choice, do, 8¢; fancy, 7½¢; choice, 7¢; standard, 6½¢; prime, 6¢.
Apples—Evaporated, 5½@7¢; sun-dried, 4@5¢.
Peaches—Fancy, 6½¢; choice, 6¢; standard, 5½¢; prime, 5¢; peeled, in boxes, 12@13¢.

Pears—Fancy, halves, 5½¢; quarters, 4½¢; choice, 4¼¢; standard, 3½¢; prime, 3¢.
Plums—Pitted, 4@5¢; unpitted, 1½@2¢.
Prunes—Four sizes, 4¼@4½¢.
Nectarines—Fancy, 7¢; choice, 6½¢; standard, 6¢; prime, 5½¢.
Figs—White, choice, 5@5½¢; Black, choice, 1½@2¢.
Raisins—4-crown, loose, 4¢ ¢ lb. in 5-lb. boxes; 3-crown, 2½¢; 2-crown, 2¢; seedless Sultanias, 3¢; seedless Muscatels, 2¢ ¢ lb; 3-crown London Layers, \$1 25 ¢ box in 20-lb. boxes; clusters, \$1 50; Dehesa clusters, \$2; Imperial clusters, \$3; 4-crown, loose, \$1 15; 4-crown, loose, faced, \$1 25 ¢ box.
Dried Grapes—1½¢ ¢ lb.

NUTS—Market quiet at unchanged figures. We quote: Chestnuts, 11@12¢; Walnuts, 5@7¢ for hard shell, 8@10¢ for soft shell and 8@10¢ for paper shell; California Almonds, 7@7½¢ for soft shell, 4½@5¢ for hard shell and 8@8½¢ for paper shell; Pecans, 4½@6¢; Hickory Nuts, 5@6¢; Filberts, 8½@9¢; Pecans, 6¢ for rough and 8¢ for polished; Brazil Nuts, 7@7½¢ ¢ lb; Cocoanuts, \$4@4 50 ¢ 100.

HONEY—Business continues of small volume. We quote: Comb, 10@11½¢; water white extracted, 7@7½¢; light amber extracted, 5½@6¢; dark amber, 5@5½¢ ¢ lb.

BESWAX—Quotable at 24@26¢ ¢ lb.

BUTTER—There is much poor new stock on the market which is slow of sale at low figures. For fancy creamery there is quick demand at firm prices, an occasional sale being made above quoted figures. Ordinary qualities of dairy butter are in liberal offering, with rates easy. Fancy creamery, 23@25¢; fancy dairy, 19@21¢; good to choice, 16@18¢; fair, 14@15¢; store lots, 12@13¢; pickled roll, nominal; firkin, 15@16¢ ¢ lb.

CHEESE—The demand is mostly for choice stock, which is none too plentiful. Prices steady. We quote: Choice to fancy, 9@11¢; fair to good, 7@8¢; Eastern, ordinary to fine, 12½@14¢ ¢ lb.

EGGS—Quotations are well maintained, owing to stormy weather. We quote as follows: California Ranch, 34@36¢, with a small advance occasionally for something fancy; store lots, 27½@32½¢; Eastern Eggs, 22@24¢ ¢ dozen for cold storage and 25@26¢ for fresh.

POULTRY—Receipts are light but prices do not improve, as custom is slow. We quote: Live Turkeys—Cohlers, 9@11¢; Hens, 9@11¢ ¢ lb; dressed Turkeys, 12@14¢ ¢ lb; Roosters, \$4@4 50 for old, and \$3@6 for young; Broilers, \$3@4 for small and \$4@5 for large; Fryers, \$4 50@5; Hens, \$4@5; Ducks, \$5@6 50; Geese, \$1 50@2 ¢ pair; Pigeons, \$1@1 50 ¢ dozen.

GAME—Market shapes in favor of buyers. We quote: Quail, \$1 25; Partridge, \$4@6; Mallard, \$2 50@3; Sprig, \$1 75@2; Teal, \$1 25@1 50; Widgeon, \$1 25@1 50; small Ducks, 90¢@81¢; English Snipe, \$2@2 50; common Snipe, \$1 25@1 50; Brant, \$1 25@1 50; Gray Geese, \$2 50@3; White Geese, \$1@1 25; Rabbits, \$1 25@1 50; Hare, 75¢@81¢.

PROVISIONS—Moderate trade at fairly steady prices. We quote as follows: Eastern Sugar-cured Hams, 11¢ ¢ lb; California Hams, 10@10½¢; Bacon, Eastern, extra light, sugar-cured, 13¢; medium, 8½¢; do, light, 9@10¢; extra light, 11@12½¢ ¢ lb; Pork, extra clear, bbls, \$18; half hbls, \$10; Pig Pork, hbls, \$21; hf hbls, \$11; Pigs feet, hf hbls, \$4 50; Beef, mess, hbls, \$7 50; do, extra mess, bbls, \$8 50; do, family, \$10; extra, do, \$10 50@11 ¢ bbl; do, smoked, 9@10¢; Pickled Tongues, hf bbls, \$7; Eastern Lard, compound, tierces, 6½@6¾¢; do, prime, steam, 8½¢; Eastern, pure, 10¢ pails, 9½¢; 5-lb pails, 9½¢; 3-lb pails, 9½¢; California, 10-lb tins, 7½@8¢; do, 5-lb, 8@8½¢; California pure, in tierces, 7½@8¢; do, compound, 6@6½¢ for tierces.

WOOL—Business is at a standstill in local circles, while dullness is reported as prevailing at Eastern centers. We quote Fair:

Free Northern.....	7	@	8½¢
Northern, defective.....	5	@	7
Southern & San Joaquin, light and free.....	5	@	6
Do, defective.....	3	@	4

HIDES AND SKINS—Quotable as follows:

	Sound.	Culls.
Heavy Steers, 54 lbs up, ¢ lb.....	6½@7	c 5½@6
Medium Steers, 48 to 56 lbs.....	5½@6	5 @
Light, 42 to 47 pounds.....	4 @	3½@
Cows, over 50 lbs.....	5 @	3 @3½
Light Cows, 30 to 50 lbs.....	4 @	3 @3½
Stags.....	3 @	2 @
Kips, 17 to 30 lbs.....	4½@	3 @3½
Veal Skins, 10 to 17 lbs.....	5½@	4 @4½
Calf skins, 5 to 10 lbs.....	7 @	6 @

Dry Hides, usual selection, 8½@9¢; Dry Kips, 7@7½¢; Calf Skins do, 12@13¢; Cull Hides, Kip and Calf, 6@8¢; Pelts, Shearings, 10@20¢ each; do, short, 25@30¢ each; do, medium, 30@40¢ each; do, long wool, 40@70¢ each; Deer Skins, summer, 25@30¢; do, good medium, 15@22½¢; do, winter, 5¢ ¢ lb; Goat Skins, 20@35¢ apiece for prime to perfect, 10@20¢ for damaged, and 5¢ each for Kids.

TALLOW—We quote: Refined, 5½@6¢; rendered, 4½@4¾¢; country Tallow, 4@4¼¢; Grease, 3@3½¢ ¢ lb.

MEAT MARKET.

Mutton and Lamb are both firm at quotations, while Veal shows a little easier tone. Following are the rates for whole carcasses from slaughterers to dealers:

BEEF—First quality, 5@5½¢; second quality, 4½¢; third quality, 3½@4¢ ¢ lb.
CALVES—Quotable at 4½@5½¢ for large and 5½@7¢ ¢ lb. for small.

MUTTON—Quotable at 5½@6¢ ¢ lb.

LAMB—Quotable at 6½@7¢ ¢ lb.

PORK—Live Hogs, on foot, grain fed, heavy and medium, 3½¢; small Hogs, 4@4½¢; dressed Hogs, 5½@6¼¢ ¢ lb.

The Buckbee Nurseries.

H. W. Buckbee, the seed farmer and merchant of Rockford, Ill., invites his old California patrons and the California public in general to correspond with him. Mr. Buckbee's is one of the best known houses on the "reliable list," and we have yet to hear of any variance between the promise and the performance of his goods. A beautiful catalogue of seeds, plants, flowers and trees sent free upon application to H. W. Buckbee, Rockford, Ill.

Two New "Planets."

The Rural has received from S. L. Allen & Co., Philadelphia, a beautifully illustrated catalogue of the "Planet Jr." implements which have lately become so widely used on this coast. Two new tools have been added to the line, namely, Planet Jr. orchard cultivator and planet Jr. plain side-wheel hoe. Both of these new implements have special interest to California orchardists. Allen & Co. will send catalogues free to applicants.

BACK FILES of the PACIFIC RURAL PRESS (unbound) can be had for \$2.50 per volume of six months. Per year (two volumes), \$4. Inserted in Dewey's patent binder, 50 cents additional per volume.

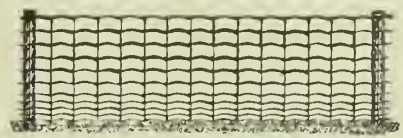
Commercial Products Obtained from Sharks.

Sharks, says a writer in the *Revue Scientifique*, furnish quite a number of valuable products. Thus, the liver of the shark contains an oil of a beautiful color, that never becomes turbid, and that possesses medicinal qualities equal to those of cod liver oil. The skin, after being dried takes the polish and hardness of mother of pearl. It is marbled, and bears a resemblance to fossil coral. It is used by jewelers for the manufacture of fancy objects, by binders for making shagreen, and by cabinet makers for polishing wood. The fins are highly prized by the Chinese, who pickle them and serve them at the end of a dinner as a most delicate *hors d'œuvre*. A ton of fins usually brings (at Sydney) \$140. The Europeans, who do not yet appreciate the fins of the shark as a food product, are content to convert them into fish glue, which competes with the sturgeon glue prepared in Russia. This glue is employed for clarifying beer, wine, and other liquors. It is used also for the preparation of English taffetas, as a re-agent in chemistry, etc. The teeth of the shark are used by the inhabitants of the Ellis islands for the manufacture of weapons of war. As for the flesh of the shark, that, despite its oily taste, is eaten in certain countries. It is employed also, along with the bones, in the preparation of a fertilizer. The Icelanders, who do a large business in shark's oil, send out annually a fleet of a hundred vessels for the capture of the fish.

THE GENUINE "BROWN'S BRONCHIAL TROCHES" are sold only in boxes. They are wonderfully effective in Coughs, Hoarseness or Irritation of the Throat caused by cold.

A Calendar Worth Having.

Almost every one has use for a calendar; and by the same token, they ought to have one that is of some use. A calendar that you have to study or "set" has little excuse for existence. The one we like best of all is that published by N. W. Ayer & Son, the Newspaper Advertising Agents of Philadelphia. The handsome copy for 1895 carries on its seal their famous motto, "Keeping Everlastingly At It Brings Success," which will alone each day be worth to all who use it far more than the price of the calendar. The price is 25 cents, delivered everywhere post paid, and in perfect condition.



Non-Support No Cause for Divorce.

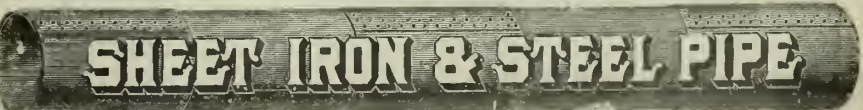
About a dozen agents from distant states were visiting the factory about Christmas. They insisted on seeing some old Page fence, and were driven out and alongside one of the first put up near Adrian. There it stood straight, taut, and as pleasant to look upon as though just erected. But one of the party was bound to get his hands on it that he might tell his customers. A few shakes of the fence brought the whole party out, for there in succession, were four posts, twenty feet apart, rotted entirely off, and the fence didn't seem to know the difference. **PAGE WOVEN WIRE FENCE CO., Adrian, Mich.**

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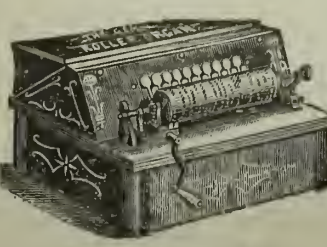
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The Roller Organs have No Equal. For dance music save their cost in one night. Any one can play them. Over 600 tunes to select from. Plays sacred, popular songs and dance music. Also,

PIANOS AND ORGANS. Terms moderate. We also keep Accordions, Banjos, Mandolins, Violins, Strings and Sheet Music. Circulars free. **C. H. HAMMOND, Commission Merchant,** Room 4, Fourth Floor, 26 O'Farrell Street, San Francisco.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING DECEMBER 25, 1894.

531,495.—CARTRIDGE CRIMPER—T. R. Barney, S. F.
531,616.—CAN-TESTING MACHINE—Jos. Black, S. F.
531,588.—BRAKE—Dickinson & Warner, Tacoma, Wash.
531,372.—SHOULDER BRACE—W. M. Gamble, New Whatcom, Wash.
531,535.—HARVESTER—G. W. Ingersoll, Stockton, Cal.
531,378.—GATE—J. E. Knapp, Brownsville, Ogn.
531,386.—GLOVE—R. Raymond, S. F.
531,571.—ANIMAL TRAP—V. J. Scherb, Pasadena, Cal.
531,399.—TELLURIAN—C. G. Sullivan, Woodland, Cal.
531,451.—CAN-HEAD DIE—N. Trayer, Astoria, Ogn.
531,580.—CINCH PLATE—A. P. Weeks, Santa Cruz, Cal.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible by mail or telegraphic order. American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

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Pure Food Exposition.

MECHANICS' PAVILION,

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Mrs. Mary J. Lincoln, author of the Boston Cook Book, will lecture daily on cooking.

Concerts Afternoon and Evening.

Persons attending the Exposition will be able to secure excursion rates by rail.

For particulars apply to

WILLARD B. HARRINGTON, Chairman,

123 California St., Room 2.

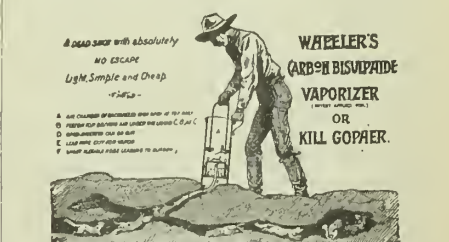
F. L. MAGUIRE, Manager.

THE TENTH ANNUAL MEETING

Of the Stockholders of the

CALIFORNIA FRUIT UNION,

For the election of a board of nine (9) Trustees for the ensuing year, and the transaction of such other business as may come before the meeting, will be held on WEDNESDAY, January 16, 1895, at 11 A. M., in the office, Room 14, 507 Montgomery St., San Francisco. **L. W. HUCK,** Secretary California Fruit Union.



Destroy the Gophers!

You may now grow alfalfa on the uplands and save grain, trees and flowers. Price \$2. Sold by the trade or by manufacturer of **WHEELER'S CARBON BISULPHIDE,** Utah and Alameda Sts., San Francisco.

B KEEPER'S SEND FOR Sample copy of **CLEANINGS IN BEE CULTURE.** A Handsomely Illustrated Magazine, and Catalog of **BEE SUPPLIES** FREE. **THEA. I. ROOT CO., Medina, O.**

Patrons of Husbandry.

From Two Rock Grange.

PETALUMA, Dec. 5, 1895.

TO THE EDITOR:—Despite one of the hardest storms of the season. Two Rock Grange turned out in force on the 3rd inst., conferred two degrees on a class of four candidates and installed the new officers for the coming year. Without the manual, Bro. J. C. Purvine installed all of the officers elect, save two, who were absent, they being Bro. Andrews, secretary-elect, who was sick, and Bro. Nisson, overseer-elect, who was in attendance at the Poultry Show in San Francisco.

The following were installed: Master, G. W. Gaston; Overseer, C. Nisson; Lecturer, Sister E. R. Martin; Steward, E. Brady; Assistant Steward, W. Church; Chaplain, Sister M. L. Hinchshaw; Treasurer, T. Keegan; Secretary, R. Andrews; Gate Keeper, Chas. Hunt; Pomona, Sister M. Keegan; Flora, Sister E. Denman; Ceres, Sister S. J. Sales; Lady Assistant Steward, F. Andrews; Organist, P. Hubbell; Trustee, A. Linebaugh.

Our grange is still prosperous; it is growing in numbers and is accomplishing much good in the community. We have lost but five members in the last year—two by death, two on account of sickness and one removing to Hollister. Can any other grange of 100 members show as little loss? We wonder if co-operation has anything to do with it?

Appropos of the contemplated plans for reviving and promoting the growth of the grange in California, with all due respect to the opinions and judgment of some of the veterans in the order, it is my opinion that co-operative efforts in the subordinate granges will do more to bring in members and to hold them, than any or all other methods that can be devised. The grange must have some definite and fixed object of attainment before it; something that is tangible, something wherein each and every member can see direct benefits accruing to themselves, before the order will make any great and permanent growth.

This is a selfish world, and to influence and lead society you must appeal to their predominant traits. Nothing succeeds like success. Having once brought them within the grange, then inspection, reading circles, etc., will be an excellent means of educating and interesting them. But when you are going to cook a hare, "you must first catch him."

Plant the seeds of co-operation in your grange; you will be surprised to see what a growth will follow if properly begun and carefully attended to. Let two or three begin buying together, either at your local town or at the houses in San Francisco with which we have contracts. Appoint committees of earnest members who have made some study of the subject; let these committees hunt up and arrange plans whereby their members may beneficially co-operate. There are scores of ways in every neighborhood. For instance, in buying lumber, wood, or feed; also, in dealing with your blacksmith, your butcher, your merchant, and in many other ways. Be careful; pay as you go; be satisfied at first with small but sure gains; train yourselves to act together, to trust and rely on each other, and as you advance and feel sure of your strength you can branch out and develop into larger things. Once there is a small number of thoroughly drilled, earnest, enthusiastic co-operative granges in existence, then the order can begin in earnest to advance in State co-operative designs. Large armies are drilled by companies, then regiments, and so on up. Just so with the grange. In the past we have been trying to begin near the top of the ladder in co-operative efforts. Let us begin at the bottom.

Patrons, you who love the order and would see it regain its former prestige, take this matter up in your own grange. "Be patient, be earnest, be faithful, and success will crown your efforts."

A. P. MARTIN.

Installation at Yuba City.

TO THE EDITOR:—The storm Thursday and Friday was fraught with dismal forebodings for a successful grange meeting on Saturday or for a meeting at all. But, as luck would have it, the rains ceased and the winds became quiet and a general equilibrium was restored, and would you believe it, the biggest turnout of jolly grangers was the result. All hoped to see and hear Worthy Lecturer S. Goodenough, who had been engaged to install the recently elected officers. But he was not present at the opening ceremonies. There was a possibility of his coming on a delayed train, hence installation was postponed to the afternoon. However, no time was lost. Routine business occupied the time and, this concluded, the dinner so generously provided by the ladies was announced as ready; a recess was declared and all formed themselves into a procession and marched to the banquet hall, a block away, where an hour was spent in good cheer and careful attention to the wants of the inner man. The feast was abundant and of the best imaginable, and the tables were decorated with fresh ripe oranges grown in the groves of members. As I admired them and gave them a good test I wondered how many grange feasts outside of California were thus decorated by home-grown oranges. Of course, oranges are no rarity anywhere in the civilized world, but they are indisputable evidence of climate and soil only found in isolated regions of the globe. These exercises concluded, a return to the hall was ordered, where music and other amusements prevailed for a time.

The meeting was again called to order, and as the worthy State lecturer had not arrived, the writer was selected to perform the ceremony, which he did, with the assistance of Bro. B. F. Walton as conductor. This being concluded, music and impromptu remarks entertained the audience until the lengthening shadows signaled the hour for departure. Much is expected of the members who have been put in charge of Yuba City Grange for the year, and the impression is general that the confidence has been well bestowed. Take it all in all, it was one of the pleasantest meetings our grange has had for several months.

Now a Little Digression.—For some time matrimonial tendencies have been observable among the members of our grange. Sister Eda Walton led the procession, next followed by Sister Annie McCune, both finding their life partners roaming about outside the grange fields. Whether these will eventually come to our fold is a matter for speculation. Their names now are Eda Taylor and Annie Littlejohn. Now comes the latest conquest, all occurring with members of this grange. A signal at the gate came from Bro. D. D. Green and from Bro. B. F. Walton, each filing in with their recently captured trophies, having joined life and fortunes with sisters of the order and our grange. Sister Hattie S. Jones accompanied Bro. Walton, and Sister Julia Littlejohn came with Bro. D. D. Green. Being seated, the master at once declared a recess for a patrons' greeting, which was extended with a hearty good will and the congratulations of all present. Sister Walton, having been absent from our midst for some time, was most affectionately welcomed home by her numerous friends.

Brother and Sister Green will reside in Yuba City, the brother having been elected county clerk at the last election. Fraternally,

GEORGE OHLEYER.

Yuba City, Jan. 6, 1895.

Chemistry is offering a means to oblige would-be dynamiters to betray themselves should they try to carry about hand grenades and cartridges. It is to mix dynamite with certain salts that give out a stench, and plunge cartridges into a solution of these chemicals. This foetid smell thus caused is not to be got rid of, and is communicable. A person carrying this infernal machine, or who had carried or handled one, unless with leather

gloves which had been taken off with great care, would be at once detected by the odor.

Horseshoes of Cast Steel.

Every now and then one hears of an attempt to make a horseshoe by casting instead of forging it. A Chicago firm produced a lot of such shoes a year or two ago, and the experiment has been tried by others. A few weeks ago, in Glasgow, there was a public exhibition of a new attempt in this direction. A mould of steel was used, and this was provided with such mechanism that immediately after the shoe is cast the matrix may be opened, whereupon one lever causes two cutters to remove the surplus metal, and another operates punches which make the holes. The steel used was a Bessemer, made by the Walrand-Legenis process, whereby great heat and fluidity is secured by putting a little ferro-silicon into the converter just as the blow is finished. It does not appear from the story at hand whether or not toe and heel calks are formed on the castings, but one is left to infer that the blanks are in substantially the same unfinished condition as the forged shoes now so extensively used in this country. The latter require not only the addition of the "clip" and calks, but also more or less shaping at the hands of the shoer, to fit the horse; and it is difficult to see how such work can be done on a casting, owing to its brittleness.

It is now something like forty or fifty years since machine-made shoes were introduced in the United States. These met with opposition from blacksmiths at first, but they have grown in popularity until now the great majority of working-horses out in Eastern rural districts are thus shod. In cities, too, they are in constantly increasing use. Street-car companies which still rely on horse power, use machine-made shoes. In many cases a better quality of iron is employed in manufacturing these shoes than is sold to the blacksmith for the hand made article. Many owners of private carriages imagine that the latter style of shoe is preferable; but within five years a light machine-made shoe of Bessemer steel has come into the market, which seems to be well adapted for this class of custom. There is nothing like it in Europe. The machine-made shoes in general have not been appreciated so fully and promptly there as on this side. Of course, the great majority—say ninety-five per cent—of them are made of iron, and not of steel; but veterans in the trade scoff at the idea of casting the metal, whether it be one or the other, for the reason already given.

ASTHMA, Distressing Cough, SORE JOINTS —AND— MUSCLES.



Despaired
OF RELIEF.
CURED BY

Ayer's Cherry Pectoral

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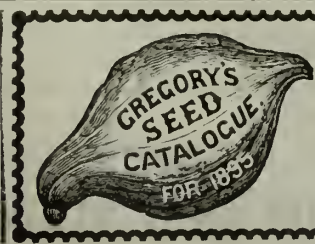
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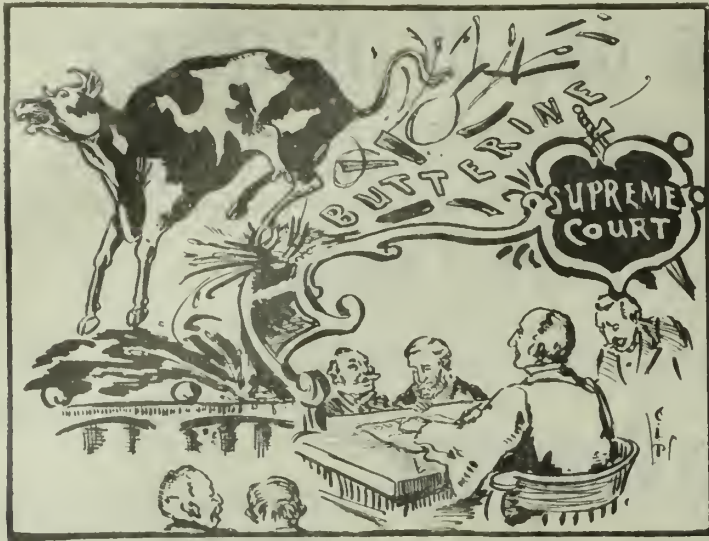
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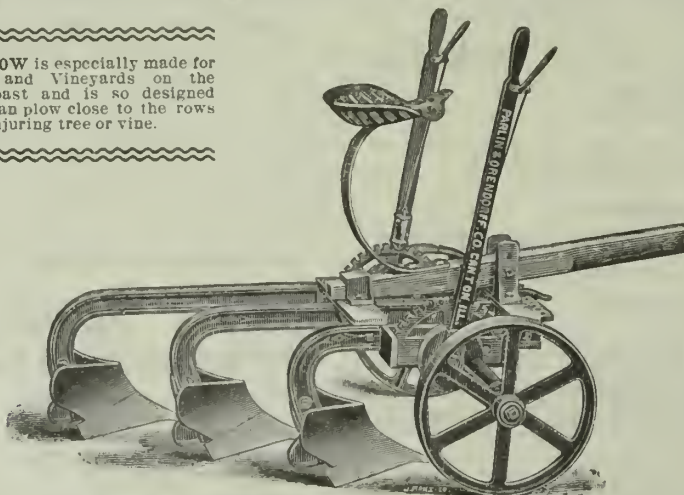
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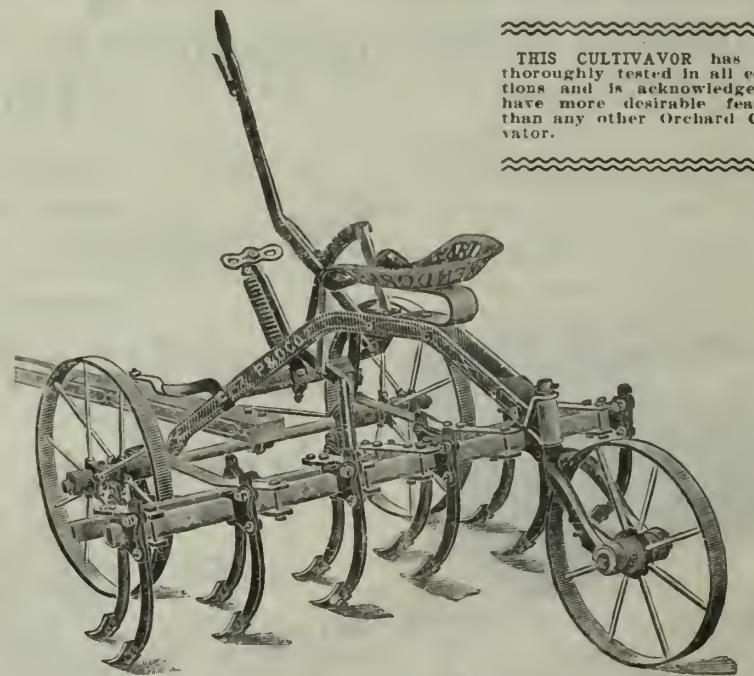
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THE PACIFIC RURAL PRESS

AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 3.

SAN FRANCISCO, SATURDAY, JANUARY 19, 1895.

TWENTY-FIFTH YEAR.
Office, 220 Market Street.

New Flowers by Luther Burbank.

We give on this page another page from the new creations in fruits and flowers by Luther Burbank of Santa Rosa. In earlier issues we have referred in general terms to the extent of Mr. Burbank's undertakings in cross-fertilization and hybridization of plants, and have cited some of his results, especially in the line of new fruits. This time we choose two of his new flowers—a rose and a calla. In our last volume we gave a picture of a single rose of the kind now shown here in a cluster. It is one Mr. Burbank names "Peach-blow," and which he evidently regards very highly. The flowers last year ruled one-third larger than before, and approach the size of La France. The flowers in the engraving are about one-half natural size. The Peachblow grows a round, stocky bush about two and one-half feet high and across and blooms all summer, but not as freely as La France perhaps. The buds are especially elegant; on stiff, upright stems. The foliage is large and leathery, glossy green, with new growth crimson. The picture shows the character of the leaf well, also the form of the flower, but it fails of course of its coloring, which is notably fine. The inside of the petals is a pale, silvery, peach pink, like La France; the reverse is dark, bronzy carmine pink. The effect of the open bud is entrancing.

Of late the desirable thing in callas is smallness. There is no trouble, especially in California, to grow immense callas, but to get small ones, which are of great value in florists' work and to amateurs as well, has not been possible until lately. A few years ago the calla "Little Gem" came out and was speedily distributed, for the desirability of such a bloom was universally recognized. Mr. Burbank has now made the Little Gem rather a

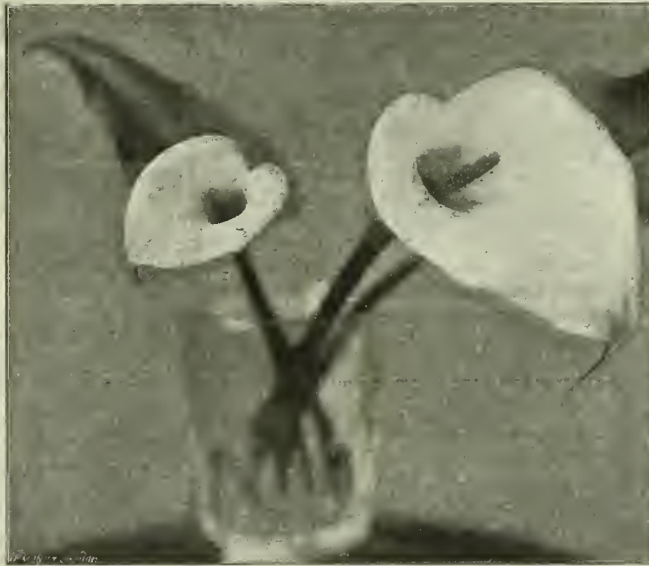


CALLA SNOWFLAKE—LIFE SIZE.

large bloom. He grew about 18,000 seedlings of Little Gem and secured several valuable new kinds, one of which is the one he names Snowflake, shown in the engraving. It never grows half as large as Little Gem and produces in profusion tiny, snow-white, gracefully molded flowers. In the engraving on this page the Snowflake is shown in one case in its exact natural size, as can be seen by the section of the rule which is also photographed. In the glass the Snowflake is shown with Little Gem on one negative, so the comparative size can be strikingly appreciated. Mr. Burbank assures us that the Little Gem and the Snowflake were both grown under exactly the same conditions. The flowers, leaves and plants of the Snowflake are not nearly half as large as the Little Gem. The leaves of Snowflake, as can be seen in the life-size engraving, differ in shape from

callas ordinarily, the lobes being more rounded. It is a matter for satisfaction that California can claim to grow both the largest and the smallest callas known to the floral world.

A LARGE European demand for American horses is reported. An agent from Scotland is here with or-



SNOWFLAKE AND LITTLE GEM COMPARED.



NEW ROSE, PEACHBLOW—HALF LIFE SIZE.

ders to buy 2500 head, and one from Belgium intends to secure 25,000 head, which he is looking for in both Eastern and Western markets. They are taking all classes, but want good individuals of good breeding.

BIRCH waited long for a full recognition as a cabinet wood. Within the past year it has made great strides in the favor of manufacturers of furniture and finish. It looks now as if it were to take the place of cherry in a large way. No Northern and comparatively cheap wood can be utilized for light-colored finish so well as birch.

THE real secret of birds flying seems to lie in their ability to exert greater energy in proportion to their weight than other animals. They develop about three times as much horse power per pound of weight as man.

The State Floral Society.

The California State Floral Society held its annual meeting in this city last Friday. The reports of the officers showed the society to be in thriving condition with a live membership of nearly 200 and finances in good shape. In his annual address, the president recalled the fact that the society had given three successful flower shows during 1894, all of which had brought credit to the society and to the floral resources of California. He congratulated the society also upon its share of credit for the increased interest which is now discernible in floral matters and home improvement throughout the State. The election of officers for the current year was had with the following result: President, Prof. E. J. Wickson; vice-president, Mrs. L. O. Hodgkins; secretary, Emory E. Smith; corresponding secretary, Mrs. W. H. Smythe; treasurer, John Henderson Jr.; accountant, Miss E. E. Baily. W. H. Davis and John Hinkle were chosen to act in conjunction with the officers as the board of directors.

The society, by vote, decided to hold a rose show in San Francisco next spring, so our readers are all warned in season to prepare their best cut blooms and roses in pots. The exact date of the show will be declared later.

SHEEP and cattle ranchers in southwest Texas are asking the State to help them to exterminate or keep down the wild animals that are playing havoc with stock in that region. So far from the advent of settlers thinning out the panthers, wolves and coyotes, the animals are increasing greatly in numbers through the plenty of food afforded by the vast herds of cattle and sheep. The ranchers have spent thousands of dollars in trying to abate the pest, but without avail, and now they want the

State to take a hand in the extermination of these troublesome devastators.

THE unemployed of San Francisco have started a labor exchange, which will also be a sort of barter bureau. Each producer can bring his product and exchange it for what he wants through an exchange certificate. This brings business down to original principles, and may be worked up into something of permanent value. The exchange of products is the essence of making a living.

THE total supply of all kinds of wool in the United States is 130,520,600 pounds, the supply of domestic showing a shrinkage of 19,795,900 pounds, the supply of foreign showing an increase of 9,088,000 pounds, the total supply on hand carried over showing a decrease of 11,407,900 pounds.

PACIFIC RURAL PRESS.

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Our latest forms go to press Wednesday evening.

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ALFRED HOLMAN Editor.
E. J. WICKSON Special Contributor.

San Francisco, January 19, 1895.

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The Week.

We have received a short note from R. C. Kells, the well-known orchardist of Sutter county, asking if there is a Poland-China Breeders' Association in this State and suggesting that more prominence should be given to the swine interest of California. Mr. Kells is right. The swine interest of California is very important, and its present value would not be a tithe of its value if swine men would earnestly bestir themselves. There is no association of breeders of Poland-Chinas in this State, nor of the Berkshires, nor of any other breed of swine. Not only is there this lack, but our breeders do not take interest enough in this matter to properly connect themselves with the National Associations in these interests. A few years ago there were several memberships by Californians in these general associations, but recently even this enterprise has lessened, and though we have a few members resident in this State, they can probably be counted on one's fingers. This is not right. If California swine breeders would bestir themselves, organize locally and do something systematically for the advancement of the local swine interest, the local product could be many times increased, and still better values obtained. We need to develop packing interests and shut off the trainloads of Mississippi valley pork products which are profitably marketed here. We cannot do this by floating land schemes under packing signs. The pork producers must proceed intelligently and resolutely in their own interest, and we have no doubt capital will be available. It is a shame that California, with the best conditions in the world for producing sweet, healthy pork, should be paying hundreds of thousands of dollars annually for Eastern pork products. More than that, we should be exporting these articles. But little can be done until the pork producers organize and advance in their own interest. Mr. Kells knows what work has done for the fruit interest, for he has done lots of it himself. Perhaps if he takes off his coat again and rustles in this new field he can draw others to him, and the California pork interest will do something for itself. The RURAL PRESS has repeatedly urged this, and stands ready to work for it with Mr. Kells and all others who will rally to the effort. Let us hear from all who will take hold.

Frozen Oranges.—Suffering Floridians are doing their best to realize something out of their frozen oranges, but the receipts will probably be small, on the whole. On general principles, the marketing of frozen fruit will hurt the seller more than the small money he is likely to get will help him. Some other people than Floridians found out the truth of that last year. It

seems from telegraphic dispatches that the health authorities are interfering with the trade and have stopped their sale in New York and Boston. The Health Commissioner of Chicago is reported to have said: "There is ample provision in the city ordinances to stop the sale of unhealthful food. I have sent men to watch the cars and stop oranges which are actually bad, and I will do the best I can. These oranges are not spoiled yet, and they have a value if used correctly. They will be sold as frozen oranges." When told that frozen or thawed oranges were not changed in appearance, he replied: "I don't see how I can condemn frozen oranges that are sold as such. But people will be better able to protect themselves when the papers publish the facts. That will help to solve the question." So it appears that the Florida shippers cannot realize much from their shipments of frozen fruit. In any event, the mass will so soon spoil that it will not long be in the way of sound fruit. It seems that immediately after the news of the spoiling of the Florida crop was received in the Eastern cities, there was a jump in the price of oranges, and choice fruit has brought \$5 for a box of 200. When the frozen oranges were received and put out at a low price, carloads were closed out in a hurry.

Catfish. A San Diego county reader wants to know where he can get a few catfish to fill a private pond with. We don't know whether any one makes a business of supplying catfish, but we do know that probably a thousand carloads could be easily secured from parties along the Sacramento and San Joaquin rivers and their sloughs. The catfish is one of the most profound admirers of the California climate. He multiplies like the toads and grasshoppers of Pharaoh, and if he were only amphibious he would take possession of the whole State. By his present limitations he confines himself to watering places, and there he is as unpopular as a certain race of men are at the Eastern summer hotels. He is a greedy monopolist and those who like other fishes often wish he had never been brought to this State. Between the catfish and the carp, both of which were zealously boomed fifteen years ago, it is a question as to which is the greater offense to the nostrils of those who dwell beside the slack waters of the interior valleys. The catfish is, however, much the better fish in the kitchen, and has much more excuse for existence than the carp, which is a water hog which yields no bacon. If any reader can arrange for a small shipment of catfish in shape to go to San Diego in a Pullman freight car we shall be glad to communicate his name to our southern correspondent.

Hay Dealers' Banquet. Hay makers are proverbially frisky and poets have probably thrown more sentiment over the newly mown meadow than upon any similar area of the earth's surface, but isn't it rather new to be emotional about hay selling? The haycock, the haymow, the great load of new hay, all these are legitimate themes for transport, but to grow light hearted and merry over baled hay—who'd a thought it? And yet San Francisco has accomplished just this feat. A few days ago the San Francisco Hay Association, organized in April, 1893, gave their first annual banquet. There were seventy-five at table, and included in the number were leading hay growers and dealers from all parts of the State. President George P. Morrow presided, and also acted as toast master. After an excellent menu had been discussed, Simon Anspacher, the retiring president of the association, delivered his annual report and congratulated the members on the vigorous growth of the association. Continuing, he said:

Our association was organized mainly for the purpose of facilitating the sale of hay daily received by dealers in this city, both by cars and boats, and instituting a practical system, commensurate with the business, that would operate in a fair and impartial manner toward all interested parties. We have attained this object through the auction system, which I consider the corner-stone of our institution, and I urge strongly upon each and every member to give it his warmest support.

All this was to be expected and was baled hay all through, but afterward there came loose hay in the form of sentiments and songs, and a toast to the ladies as a matter of course. It was, on the whole, a very pleasant affair, as any one can appreciate after he recovers from being startled at the unexpectedness of it all. The association proposes to proceed to the establishment of a regular hay exchange and other important undertakings. The officers of the association are: President, George P. Morrow; vice-president, H. C. Somers; secretary, Joseph Majer.

Mongolian Pheasants. The receipt of a letter from a Los Angeles reader asking for the address of some person who will sell Mongolian pheasants at a price which will permit of their being turned loose to increase the supply of game birds, reminds us that it is time we had some new points as to the character of these birds as it relates to fruit-growers' interests. Readers may remember the solemn warning given by some of our Oregon readers soon after the birds were set free in

that State. They were said to be vastly worse than quail in vineyards and other small fruit enclosures. Several sport lovers have brought the pheasants to this State, and, if we are not mistaken, have set them free. How have they multiplied and how have they behaved? We presume our correspondent would not care to aid in their dissemination if they prove a pest. We should like, therefore, to hear from any reader not only as to whether he can price the birds in quantity, but what they are likely to cost in invasion of fruit and garden enclosures. What about this mongol? Should it be set free or Japanned?

Sugar Beets. The sugar beets at the Government station on Union island, in the tules of San Joaquin county, were not planted until June 1st, owing to lateness in beginning the station, and little was expected of them. Samples taken from the ground December 15th and analyzed by Mr. Jaffa at the University laboratory in Berkeley showed over fifteen per cent of sugar. This is a very good beet at any time, and the fact that such beets can be sown on reclaimed tule lands as late as June 1st and harvested in good condition as late as December 15th shows how long a manufacturing season can be had in that part of California. This year, by direction of Dr. Wiley, who has charge of this branch of the work of the Department of Agriculture, sowing of beets will begin in February and continue until May, so as to demonstrate yield and quality from different dates of planting. The sugar cane on Union island has gone into winter quarters under a light cover of litter and earth, and is expected to make a good large growth next season.

Veterinary College. The Veterinary College of the University of California is duly open at the corner of Fillmore and Post streets in this city. At the opening exercises last Wednesday Dr. W. F. McNutt, president of the board of trustees, made the inaugural address and spoke of the necessity of an institution of this kind on this side of the Rocky mountains, where the live stock interests in the State alone were estimated at \$100,000,000. With this college it would be possible to show the difference between the veterinary surgeon and the unlearned empiric known as the "horse doctor." He then discoursed on the good to humanity that could be accomplished by the thorough veterinary, pointing out how the knowledge of the latter could forestall the ravages of glanders, anthrax and other diseases of the horse. He declared the college opened as an adjunct of the University of California. Encouraging addresses were made by other speakers. The first term is now in progress and will continue until June 29th. Dr. Thomas Bowhill is dean of the faculty, with the following associates: A. E. Buzard, W. F. Egan, F. A. Nief, S. J. Fraser, A. Auchie Cunningham, Frank W. Skaife and K. O. Steers. The special lecturers are Professors W. F. McNutt, William Watt Kerr, Joseph Le Conte and W. E. Ritter. We join the projectors in the hope that the new institution will accomplish much for the more intelligent and rational treatment of animal diseases on this coast.

Better Roads. Road improvement will proceed in convention, and we hope ere long between the fences. Last Friday the Sacramento Board of Supervisors unanimously voted to attend the State Road Convention, to be held in Sacramento February 7th. Secretary of Agriculture Morton has resolved to send from Washington General Roy Stone, United States Engineer of the Department of Road Inquiry, to attend the convention as requested by invitations from California. All supervisors are delegates, and all county surveyors and road engineers; also all colleges, scientific and commercial bodies, municipal councils and granges are entitled to send delegates, and there are twenty at large appointed by Governor Markham, and Governor Budd will be asked to appoint twenty more. All preparations for the approaching convention have been made, and there should be a large attendance.

Fruit Exchange Convention. The Convention of Fruit Exchanges is in session at this writing, and, as the proceedings are private, we are not able to give full report. Those present at the convention say that the feeling is excellent, and that the meeting seems certain to result in the local Exchanges assuming the support and management of the State Exchange, substantially as originally planned.

The Pomological Society. The National Pomological Society is in session at Sacramento as the RURAL goes to press on Wednesday evening, and there is a large attendance both of Eastern and California fruit growers. As the exercises have only fairly begun at this writing, we must postpone a report of the exercises to another week.

From an Independent Standpoint.

Mr. Budd signalized his entrance into the Governorship last week by an impressive renewal of his campaign promise of economic reform in State affairs. Addressing the multitude who had just witnessed his formal acceptance of office, he said: "*Here in this imposing presence, I pledge my manhood, my honor and the best ability I am able to exercise to its faithful execution.*" Following this high declaration, the new Governor reviewed the situation in a way which showed that he had made a careful and intelligent study of State expenditures. Our recklessness in public expenditure, he said, had hindered the development of the State not only by consuming and wasting its substance but by preventing settlement here. People of moderate and prudent character, he said, accustomed to economical systems, naturally hesitate to cast their lot in a State whose current annual tax rate is equivalent to an assessment of between seven and eight dollars for every man, woman and child of its population. In every avenue of business activity, he pointed out, the wage rate has persistently declined, but the affairs of the State move forward in the old grooves of extravagance and profligacy—indeed, in recent years things seemed going from bad to worse. The correction of these evils, he pointed out, rests with the Legislature and the Governor—and again he promised to do his part.

From this basis Gov. Budd proceeded to a review of State expenditures, with significant comparison of our own system with the systems of other States. In point of population California ranks twenty-second in the list of States; in the matter of gross cost of State government she ranks fourth, New York, Pennsylvania and Illinois, with their immensely multiplied populations, alone exceeding her in this respect. In the per capita cost of State government California stands first on the list, the average cost in other States being about two dollars as against her six to eight. In the comparative cost of prisons, California, while twenty-second in population, stands second on the list; in the comparative cost of militia maintenance, California stands fourth in the list of States; in the comparative cost of agricultural fairs, California stands first; in comparative cost of judiciary, California stands fifth; in comparative cost of lunatic asylums, California stands second. This showing—and the Governor supports it with indisputable figures—is a tremendous indictment, and it justifies fully the censure which the Governor heaps upon the past administration of State affairs. Proceeding to details, he declared that our asylums were overcrowded with persons who had no business to be there, and the burden of whose support had been shunted off on the State by unnatural relatives or thrifty local communities. He recommended abolishment of the existing asylum boards and the consolidation of the whole asylum system under a single non-partisan commission. In the matter of State prisons and reformatories, he made practically the same recommendation, declaring that a systematic consolidation in this department would yield a saving of three hundred thousand dollars per year. In the matter of the several State commissions for scientific and economic purposes, the Governor's recommendations were in line with his views as recently published. It is his idea that decrease of expenditure and increase of efficiency might be effected by consolidation and association with the labors of the leading universities of the State. Concerning the large expenditure for agricultural fairs (upwards of one hundred thousand dollars per year), the Governor says:

The agricultural societies as now managed are of little or no benefit to the people. There is but slight competition between classes or sections and but small rivalry in anything except horse-racing. Three annual fairs—one south of Tehachapi, one between that point and Sacramento and one north of Sacramento—would serve better to stimulate a wholesome spirit of emulation and rivalry than the present plan of a fair in nearly every county, encouraged by State aid. The place of meeting could be changed yearly, and an annual appropriation of \$5000 for each would be amply sufficient in addition to the means provided by the local directors. Three district societies and one State society would be far better than the existing system.

The Governor next directed attention to the larger leaks from the State treasury. The State, he declared, administered its charities in a way to promote mendicancy. The annual charge for the sup-

port of orphans had grown in ten years from fifty thousand dollars to four hundred thousand. The whole system, he thought, should be abolished since there is "no more reason why the State should contribute to the support of the poor of local communities than for an appropriation to help along the fire or police departments of the different towns." In the matter of officials, the Governor thinks the State service oversupplied, and he recommends a general unloading of deputies, attorneys and the like whose pay makes a large item in the State rolls, and whose service, if not an absolute fiction, is at least useless. Proceeding to constitutional reforms and matters of large policy, Gov. Budd recommends a complete revision of the laws governing city and county governments to supersede our existing scheme, which is designated as "the most unjust and unequal special legislation imaginable." There should, he says, be two constitutional amendments submitted to the people—one abolishing the clause making the findings of one Railroad Commission conclusive and another requiring special qualifications for eligibility to the office. Many other States accept none but men of special training for this most responsible position. In some a lawyer, a man experienced in railroad matters and a business man, are required to constitute the commission. In California any one who can get the nomination may run. The address closed with some further suggestions of reform in the probate system, the tax-collecting system, etc.; and with the assurance that those several recommendations, if carried into effect, will save the taxpayers of California upward of one million dollars per year—or about twenty-five per cent of the present tax for State purposes.

This is hardly the time to discuss details; but this much the RURAL must declare, namely, its full and hearty approval of the spirit in which the new Governor goes at his work. He sees, apparently, the plight we are in, and he is disposed, apparently, to help us out of it. But we long ago learned the un wisdom of too hasty judgment. Budd, indeed, *promises* well, but the proof of promise lies in performance—and for that we shall wait very hopefully. In the meantime, every citizen owes it to the head of the State to give his efforts for economic reform a patriotic and hearty support. That sort of criticism and obstruction which proceeds from motives of partisan advantage is contemptible to the last degree. As those who have read the RURAL know, it has never professed any enthusiasm about Mr. Budd, but it will do its best to support any efforts he may make to reform our extravagant and absurd system of State expenditure. He has a great opportunity for public usefulness and, incidentally, for honorable personal distinction—and we hope to see him make the most of it.

It is a very extraordinary contest that is now being waged at Sacramento for the Senatorship. The candidates aggressively in the field are George C. Perkins (present incumbent) and M. H. De Young, while Irving M. Scott of San Francisco, J. H. Neff of Placer and a dozen others are waiting round in the hope that lightning may strike them. Of the eighty-eight Republican members, forty-five—a bare majority—have pledged themselves in a so-called "caucus" to vote for Perkins, but as the other forty-three did not go into the meeting and decline to consider themselves bound by its selection, Mr. Perkins can hardly be said to be regularly the caucus nominee. Mr. De Young's managers claim that the non-caucusing forty-three are solid for him, but there is nothing to demonstrate it and it is not generally believed. It is, however, practically true that the Republican forces are about evenly divided between the two candidates, with the advantage both of numbers and enthusiasm decidedly on Mr. Perkins' side. The logical outcome of such a situation is a compromise upon a third man, and the opinion is very general that this will be the finality. Of all the dark horses the one in whose chances there seems to be the most general confidence is Mr. Scott. A close observer at Sacramento informs the RURAL to-day that in his judgment the fight lies between Perkins and Scott, with chances about even. It is not believed that it will take long to settle the matter after the balloting begins, and next Tuesday or Wednesday is likely

to see the end of the struggle. A prompt settlement is certainly to be hoped for, since it is of course out of the question for the Legislature to get down to business while the Senatorial battle agitates everybody in and about the Capitol.

Generally speaking, a United States Senatorship is regarded as a thing of larger consequence than a police commissionership of San Francisco, but during the past ten days the latter has been a much more engrossing political interest. Just before Mr. Markham retired from the Governorship he appointed Mr. M. A. Gunst a police commissioner for San Francisco, vice "Col." Dan Burns, resigned; and it is putting it very mildly to say that the city and state got a shock. Gunst is one of the best-known men in California. He is in the cigar and tobacco business, but he is known not so much as a merchant as a "sport"—one of the "square" sort. He is the friend and backer of John L. Sullivan; he leases rooms to a gambling house and is said to be interested in it as a partner; he is a member of a firm of racing book-makers and holds a proprietary relation to several well-known saloons. In short, Mr. Gunst is in the business of pandering to vice in one form or another and is in very close association with those things which it is chiefly the business of the police to watch and suppress. Of course his appointment to the police commissionership was unspeakably indecent; and it was probably intended as an affront to San Francisco—if not by Gov. Markham at least by Dan Burns, whose tool Markham was. In San Francisco indignation grew the more the matter was thought over. On last Saturday evening a public meeting of citizens, called by the Mayor, passed resolutions censuring Markham and calling upon Gunst to resign. This only added fuel to the fire of agitation—and, in the midst of it all Gov. Budd on Tuesday of this week issued an executive order dismissing Gunst from office and immediately after commissioned Mr. Stewart Menzies, a highly respectable citizen, as his successor. There is a question as to the Governor's right to do this, but he is backed up by an opinion from the Attorney-General. It is said that Gunst will contest the matter in the courts, but the chances are that he will not make his claim stick. The storm has stirred up some moral elements which have too long been silent in San Francisco, and in this view has accomplished some good.

In a recent issue of the RURAL PRESS, after discussing the Nicaragua Canal project somewhat in detail, the editor said:

It is profoundly to be hoped that the House will, as intimated in the news from Washington, "cut the Morgan bill to pieces" and in its stead adopt a straight measure of Government ownership, involving administration of the canal upon considerations of national advantage and wholly free from private and sinister influences. No other policy is in keeping with the dignity of the Government or compatible with the interests of the undertaking. And none other will be satisfactory to the people of the country.

To this position Mr. M. T. Noyes of Stockton, a well-known supporter of the canal project and a gentleman for whose opinions we have a profound respect, takes serious exception. In a letter to the editor he expresses surprise that the RURAL should depart from what he deems a common-sense view of the matter. He recites the familiar facts that the United States has no rights in Nicaragua or Costa Rica to build a canal or to do anything else; that these countries have granted a concession to the Maritime Canal Company and that this company is asking to guarantee its bonds, etc., etc. In conclusion, he says:

Does any one question the company's right to make the same offer to England, France or Germany? And does any one believe that if the offer were made, that either would not accept? One would think from the talk of those who advocate Government ownership, that Nicaragua and Costa Rica were part of United States territory. I had always supposed that they were independent nations, and that for any other nation to acquire rights there, a treaty would have to be negotiated. Unless I misunderstand it, the whole matter amounts to just this: Nicaragua and Costa Rica have granted a concession, *absolutely*, to the Maritime Canal Company to construct the canal, and if the company fulfill their part of the contract, how can they grant a concession to the United States Government or to any one else? We want the canal and we want it as soon as possible, and I believe we all ought to support the Morgan bill as the best that can be done under existing circumstances.

With all respect to Mr. Noyes, we fail to see that his questions have anything to do with the case. The facts are that the United States has no rights or relations to the canal project. But there is a universal feeling that the canal should

be built, and that when built it should be owned by the United States. The Maritime Canal Company has offered to take the United States Government in as a partner if it will provide the money to carry the scheme through. Now, it is this partnership to which we object. If the Government is to put up the money to make the canal it should own and operate it. The *RURAL* is among those who would like to see the Government acquire by regular and legitimate purchase all the interests and rights of the Maritime Canal Co., and then build and operate the canal. We believe this would be the best course for a variety of reasons heretofore stated. We object to the Morgan bill because it seems to be in the interest of the Maritime Canal Company rather than the Government, and because, further, it would establish the canal under private ownership, which we think would limit its commercial advantages. If between these views and Mr. Noyes' letter there appears to be no special connection, possibly it is because we are looking at the principles of the matter and he at its details.

Rainfall and Temperature.

The following data for the week ending 5 A. M., January 16, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the *PACIFIC RURAL PRESS*:

CALIFORNIA STATIONS.	Total Rainfall for the Week.	Total Seasonal Rain-fall to Date.	Seasonal Rain-fall Last Year to Same Date.	Average Seasonal Rain-fall to Date.	Maximum Temperature for the Week.	Minimum Temperature for the Week.
Eureka.....		31.13	18.18	..		
Red Bluff.....	1.22	18.32	11.63	13.42	60	40
Sacramento.....	1.20	16.24	8.05	9.59	60	42
San Francisco.....	1.24	16.90	9.42	11.90	64	42
Fresno.....	.58	6.93	3.16	5.72	62	40
Los Angeles.....	2.00	8.20	5.82	9.28	76	48
San Diego.....	2.34	3.22	3.15	4.55	76	50
Yuma.....	T	1.42	1.42	1.98	74	46

Gleanings.

A PALERMO orange grower informs the *RURAL* that an unscrupulous buyer has shipped out large quantities of Palermo oranges, falsely branded "Redlands," one month before the Redlands product was ripe. Complaint is made because this practice is in itself a fraud and because, further, it prevents Palermo from gaining the reputation for earliness which rightfully belongs to her.

In the southern part of the State there is an unusual demand for pickling olives this season. Good prices are paid, and it is thought there will be few left for oil. The crop is estimated at 250,000 gallons. This will bring a goodly sum into the coffers of our southern friends, which is most gratifying when many approach any sort of production so gingerly. Aside from their crop of townsites, the people below Tehachapi aim to grow what there is a call for and they strike it pretty well.

LOCAL co-operation among fruit growers continues to be a very live interest in the southern counties. The Pomona Progress says: The deciduous fruit growers held another meeting on Monday to further consider the question of forming an organization similar to that of the orange growers. There were thirty or more present from all parts of the district between Azusa and Cucamonga. The sentiment was unanimous in favor of forming a general organization to include the same territory as the San Antonio Fruit Exchange. Another meeting will be held here on January 21st.

HOG STEALING appears to be a profitable and growing industry in the upper San Joaquin country. The *Tulare Register* says: "Among the ranchers who have been despoiled are John Stokes, who lost 50 head; Mr. Allen, who lives near the Coggeshall place, is out 35 (all he had); John Mitchell lost 14 or 15; Morehead and Carmichael, 14 altogether; George Berthel, 45; and a number have missed 1, 2 or 3. These lots have been taken mostly within the past three or four months. Added to hogs, there have been stolen harness, saddles, various kinds of tools, etc. The Southern Pacific Co. has lost some property from thieving and has had a detective at work whose investigations led from ties into the hog-stealing business."

A DISPATCH from Pomona, date of 8th inst., says: "The olive crop of southern California is being harvested now, and is proving to be one of the best in several years. In Pomona valley, where olives have been made a specialty, the crop is the best yet known. The total olive crop of southern California is estimated at 250,000 gallons. Of this, Santa Barbara county produces 70,000 gallons and Pomona valley 40,000. A feature of the industry this season is the fact that more orders from wholesale fruit dealers and hotel and restaurant keepers in the East have been received already than have ever been known in any one season. It is thought that there will be such a demand for pickled olives that few will remain for use in making olive oil. Prices so far are high for pickled olives."

HORTICULTURE.

More About the California Walnut.

TO THE EDITOR:—My communication on the California walnut seems to have been misunderstood by Dr. Gunther. The point that I wished to bring out was the quality of the California nuts shipped from the southern part of the State, the only district that has made a regular business of nut growing and that has a crop in earload lots. The question is, How do the importers and wholesalers rate the California soft shell walnut in comparison with the Grenoble? This rating determines the price to a large extent in the Eastern market, and it was the lower valuation put upon the California soft shell that I brought attention to, not as to whether the various kinds of walnut trees would grow and bear paying crops in all parts of the State.

In 1891 I submitted samples of these soft shells to the brokers here and I was informed that they were not equal to the Grenoble (Mayette), and the brokers rated them with the ordinary French and Chili nuts, and they would bring about the same price. The samples of large second-generation Præparturiens and Chaberte were the first California nuts the brokers said they had seen at that time that compared favorably with the best imported nuts; and from that information I have since planted alternately with trees and vines 1000 Mayette, second-generation Præparturiens and Chaberte trees. As these trees are all young, I am far from being disappointed in my venture, as I have yet to learn whether they will bear equal to the same kind of trees I saw bearing in Nevada county last fall.

Mr. West of Stockton wrote me in 1892 that he had had good results from the Mayette. In central California nearly all counties report a few acres of bearing walnut trees, but as to the varieties or whether any one has planted for a regular business, the same as has been done in the southern part of the State, I am unable to say. The old Los Angeles nut has been planted more or less and it was a failure. Many Præparturiens and French trees of inferior variety have been set out, and the results from these trees would be misleading.

The Doctor says that Mr. Cooper dug up his walnut trees. Can he tell us what variety they were? This is very important, before determining whether the location or soil had anything to do with their failure. I am under the impression, from what I have read of Mr. Cooper's place, that he had planted largely to the old Los Angeles nut. I would also like to know if the Mayette trees that have been grown at Rivera, bear nuts up to the standard; if so, they can be sold here in competition with the Grenoble. Or was the soft shell given the preference because the trees grow faster and bear earlier and heavier crops?

Information which I have been able to get in New York this week about the present crop of California nuts sold here, only confirms what I said before—the soft shell is not equal to the Mayette. A good many brokers bought California nuts this year under the agreement that they would equal the Grenobles. They were disappointed in the quality of the nuts and do not hesitate to say so. I take a certain pride in California's products and consider it my State, and when I am told that California cannot grow walnuts equal to the Grenoble, I rather differ, as I claim it is because the true Mayette has not been given a show.

Sulphuring the nuts as done by some of the French and California growers is bad, as it seems to injure their keeping quality. The Grenoble, they claim, is naturally a bright-shelled nut. The Mayette nut is grown in the southeast of France, in the foothills of the province of Isere, of which Grenoble is the principal town and shipping point, 150 miles inland from the Mediterranean, with a climate very likely not influenced by fogs which are thought necessary to make the California trees bear; now is it not this damper air of western France and the California coast that makes sulphuring of the shells necessary in order to have them look bright like the Grenobles? I find the Grenobles here mixed with inferior nuts, which is done either before shipping or after arrival.

This year the French crop was short and the ordinary French nuts are quoted at 9½ cents here, an advance of two or three cents over the average price; and it was owing to the short crop that more California nuts were bought in the East than ever before. A good many brokers speculated in them, paying 8 cents in California and costing 10 cents here. The brokers thought that the California nuts were equal to the Grenoble which was selling here at a price that would allow a profit, but upon delivery they found that the California nuts were of the same grade as the ordinary French nuts, quoted at about 9½ cents; and instead of making a profit upon their purchase, they were lucky to come out even, some losing on their venture. It may be said that the California soft shell is all right, but it will be found

that the same will never sell for the price the Mayette does in the East. Any one who has compared the two nuts can easily see why. C. L. HEALY.
New York, Jan. 4, 1894.

Olive Growing in Southern California.

By JOHN S. CALKINS of Pomona, Cal., at the recent Farmers' Institute, Azusa.

In complying with your request to contribute a paper upon the outlook of olive culture in California, I will aim to treat the subject from a practical standpoint, divesting myself as far as possible of enthusiasm, as that is not generally regarded as a safe factor to enter into a business proposition. Still, a wise man has said that "Enthusiasm is the genius of sincerity, and truth accomplishes no victories without it." We are told that the difference between riding a hobby and riding a hobby horse is that you get off the horse, but never get off the hobby. You will understand how this is emphasized in my case when I state that, following a natural inclination, I engaged in the work of propagating trees early in life, which has been zealously continued up to the present time. Since 1878 my work has been in this county, and for the past six years confined to the olive. I trust my love for the pursuit will serve as an excuse for the enthusiasm which has been imputed to me, and which I think is pardonable in view of the fact that I always manage to suppress the major part of it while discussing the subject.

The question arises: Are the conditions here favorable to the production of the fruit? The many object lessons throughout the State in the shape of bountiful crops of olives answer that satisfactorily. It is in evidence that trees are in bearing this season which were planted by the Mission Fathers a hundred years ago, and I know of trees in this neighborhood that bore a crop this year which were planted as yearlings in 1891. I have in mind at this time a young olive orchard in this valley of some fifteen acres, the yield of which this year is estimated at 8000 to 10,000 gallons. Still, persons continue to assert that the olive does not bear. Such false assertions tend to retard the industry and do harm. I will mention a case in point. About fourteen years ago a friend of mine procured olive cuttings with a view of raising an orchard, but was dissuaded by his friends from doing so, however. He planted a number, thinking that the trees they might produce would make hitching posts at least. Several of them grew into trees and have been in bearing for years. One season one of them bore fifty gallons. His officious friends succeeded in steering him clear of a competency, which but for them he might now be enjoying. It is well known to those who are conversant with the matter that the conditions in this State are specially favorable to the production of large crops of olives, and that the trees come into bearing several years younger than they do in Europe. If the trees become unfruitful, or come to bear every other year only, it may be attributed to the black scale or to neglect of rational annual pruning more than to any inherent defect or characteristic of the tree. By spraying my trees annually with the rosin wash at an expense of less than ten cents per tree, I have kept them clean and they have not suffered in the least degree from scale. It is believed that the ladybirds which have so completely ridded olive and orange orchards of black scale in Santa Barbara county will be in time equally efficient throughout the State. Olive trees bear their fruit on wood made the previous season, and the bearing branches in two or three years become partly or wholly unfruitful; so the rational method of treatment is to remove annually the unfruitful branches, having had in view in the previous pruning the retaining and promotion of new fruit-bearing wood to take their places.

The next question is: Can the product be sold at a profit? Up to this time the yearly output has melted away so that in a few weeks after being placed upon the market it is practically consumed. The stores here in Pomona pay the growers this year seventy-five cents per gallon for No. 1 pickles, and persons who buy olives from the growers to convert into pickles pay five cents per pound, which is about twenty-five cents per gallon; but most of the growers put up their own fruit. As a paying crop, the olive stands at least on an equal footing with any other fruit crop. Even the great returns which have been sometimes realized from the orange can be paralleled by the olive. It is fair to assume that the demand will keep pace with the supply. Olive-growing countries are olive-consuming countries. In the vicinity of Pomona, where pickled olives may be conveniently procured for a short time each year, they are coming more and more into general use, the demand for them growing with their use. The domestic output as yet is so limited that comparatively few of the people of this State ever have seen a California pickled olive. When the masses throughout the State can procure them, the quantity required to meet the home demand will be enormous.

In the matter of olive oil the supply has never been sufficient to meet the demand, which is yearly increasing. The fear that pure olive oil will be displaced by cottonseed oil is groundless. It is no more likely to occur than that oleomargarine will super-

sede butter. There is an industry springing up on this coast which will require olive oil in large quantity. I allude to the canning of the genuine sardines with which the waters of our shores abound. California is expected to come to the front on this combination.

It is stated that the annual olive product of Italy is equal in value to the annual wheat crop of this country. In compliment to our climate, California is called the Italy of America. With our favorable conditions, may we not reasonably expect that some day we will be her peer in olive production?

I learn from the Treasury Department at Washington that in 1893 this country imported more than half a million dollars' worth of pickled olives, nearly a million dollars' worth of alleged olive oil and nearly a million and a half dollars' worth of sardines. These goods find their way into the stores even here in Pomona—an olive-growing center—but they cannot be sold while the home goods are to be had. The European pickled olives are put upon our markets in a green state and are unfit for food, and it is notorious that the foreign oil is shamefully adulterated. Owing to these facts, the imported goods have not come into such general use as they otherwise would have done. Competing with Europe in the markets of this country, we will offer, as the supply increases, our mature, nutritious pickled olives and our pure olive oil raised within our borders on cheap acres of virgin fertility against her inferior product grown on her high-priced worn-out lands, and the issue will be in our favor.

In conclusion, I beg to say that I do not assume to be master of my subject, being aware of my inability to present adequately the advantages of olive culture, nor do I claim to be able to shed much light upon it; but as we are only fairly entering upon a great industry, I am willing at least to carry a lantern that those new in the work may gather a little light.

Objections to the St. Ambroise Apricot.

TO THE EDITOR:—I have fifty or sixty St. Ambroise apricot trees in my orchard and do not like them very much and would like your advice. I dry most of my fruit and want them for that use especially. The apricot is whitish around the pit and shows this when dried even after a good sulphuring. This appearance injures the sale. Is it a characteristic of the fruit or is it because the trees are young (six years old)?

The fruit is also liable to drop pretty heavily before maturing. Will this pass away with age, or would you advise me to graft my St. Ambroise trees?

ROBT. W. BURGESS.

Danville, Contra Costa Co., Cal.

We fear the trouble complained of attaches to the variety and not to the age of the trees. A six-year-old apricot tree which has been well raised is old enough to behave itself. There are several varieties of apricots which do not have good character around the pit—some are lacking in color in that part of the pulp; others assume an undesirable darkness. We would like to know what other growers conclude about the St. Ambroise. It is only about six years since it began to be largely planted, consequently its local points are not well known. Will not many growers who have handled it tell us if they have found the objectionable points Mr. Burgess mentions, and what are their conclusions of the variety generally? Such information will doubtless be acceptable to many growers.

San Joaquin Oranges.

TO THE EDITOR:—I send you down a limb which the wind broke off one of our orange trees. There are thirty-two fair sized oranges on it. They are not ripe yet, but I did not think that many people knew we were raising oranges in San Joaquin county, so I send this down to make known the fact. We have five acres of five-year-old trees with a crop of fruit on every tree almost as heavy as this sample branch. We have five acres of two-year-old trees also. The frost has never hurt the trees or fruit yet. This orchard of 320 acres was owned and planted by the old W. R. Strong Co. of Sacramento, but is owned now by the Acampo Orchard Co. I am superintendent, and have been since the land was purchased from Senator Langford seven years ago.

R. ADAMS.

Acampo, Cal.

The heavily laden branch arrived in good condition and was as Mr. Adams has described it. We displayed it prominently in our business office for several days, where it bore testimony to the citrus adaptabilities of San Joaquin county.

A RIVERSIDE MAN says he has kept oranges in good condition for eating since last April by packing them in dry sand. Several varieties of oranges were picked near Pomona on Thanksgiving Day that had hung on the trees all summer and were still in good condition. They will not always retain their freshness so well.

ENTOMOLOGICAL.

Mr. Craw's Latest Report on the Rhizobiids.

Alexander Craw, quarantine officer and entomologist of the State Board of Horticulture, has just submitted a report on the colonization in this State of parasites and beneficial insects, particularly the Australian ladybug, *Rhizobius ventralis*. In view of the great interest in this subject among orchardists, who hope to escape scale insect injuries by the aid of these friendly insects, we give Mr. Craw's report in full, as follows:

Considering the season of the year and the condition of the weather just previous to the examination, I believe we can look for good results during the coming summer when the weather will be more propitious. In the experience of Mr. Ellwood Cooper with the original colony of this ladybird, it was over a year before they increased in numbers, and about seventeen months before he sent out colonies. A number of very strong colonies were liberated around Pomona, in the latter part of last September and early in October. On December 11th, in company with John Scott, county horticultural commissioner, and Inspector James Loney, I inspected several orchards in Pomona, which showed indifferent but not discouraging results, for in most instances the trees are very large and the plantations are extensive, so that even if 1,000,000 winged beetles had been liberated it would be difficult to find them a few days later. In all places visited we found evidence of the beetles or larvæ and a cleaner condition of the trees.

In Mr. Packard's olive orchard the beetles and larvæ had spread from the tree where the colony was placed. Here we found larvæ of various sizes, from very small to fully developed specimens about ready to change into chrysalis. At Mr. Alfred Wright's olive orchard we found beetles and larvæ of *Rhizobius ventralis*, also a few larvæ of *Rhizobius debilis*. The black scale had done considerable injury to the small inside twigs, but is not so plentiful now. Mr. Loney reported to me that the *Rhizobius ventralis* larvæ were numerous in his orchard about one month previously. It was from this orchard that Mr. Scott sent the parasitized ladybird larvæ that I reported to you on November 9th. After an examination of the orchard I feel convinced that they are young *Exochomus*, and not *ventralis*, because the larvæ are only found attached to the trunks and under side of the branches, a position that the latter species, even when very numerous in your orchards, never selected. At this and a subsequent visit to Mr. Wright's orchard I collected the larvæ of the *Rhizobius ventralis* in order to determine if they, too, are subject to the attack of internal parasites, but as yet there is no indication that such is the case. I will raise them until they pass through the larva form. The mature beetle is not subject to the attack of this internal parasite, so I will secure larvæ of the *Rhizobius ventralis* at different seasons in order to fully determine if they are parasitized.

On December 12th, with Messrs. Collins and Muscott, horticultural commissioners of San Bernardino county, I visited the olive orchard of Supervisor I. E. Lord, at Cucamonga, where I placed a colony of nearly 5000 beetles on September 20th last. This orchard was in a very serious condition when the ladybirds were liberated, nearly every leaf was covered with young black scale, and it appeared to be a very desirable location for a strong colony. During our examination a strong wind prevailed and our search was not very successful, but an inspection of the trees revealed the fact that hardly a scale remained alive. At the time that this colony was placed, another of about 5000 beetles was put in the Dwinelle olive orchard at the head of Euclid avenue, North Ontario. This orchard was in a more serious condition than Mr. Lord's, but at the present is as free from live scales.

At Mr. W. C. Farlow's orange grove at North Ontario, where colonies of the *Rhizobius ventralis* were placed last fall, we could find very little scale. This orchard had also been very badly infested. Mr. Collins believes that the freedom of these orchards from scale must be attributed to heat after the young scales hatched, but it is a fact that we have had no hot days since the ladybirds were liberated. A temperature of 105° to 110° is necessary to kill the larvæ of the black scale. As the scale is alive in several orchards at Ontario, Pomona and Riverside, where the climatic conditions were unquestionably similar, to some other cause than heat is attributable the disappearance of the scale in those orchards. It is claimed that several other orchards are equally free that were formerly infested with scale, and where no ladybirds were placed, but the fact that none were put in these orchards does not prove that they did not reach there themselves. In a former report I called attention to the fact that I found the larvæ of *Rhizobius ventralis* at least one mile in a direct line from where a colony was turned out, a low range of hills intervening in this instance. Inspectors Loney and Pease each called my attention to orange trees containing beetles and larvæ, one orchard in Pomona and the other across the line in San Bernardino county.

A colony of *Rhizobius ventralis* was placed in the

Centenela orchard at Inglewood on September 23d, and upon examination of the trees December 14th I found larvæ from very small to nearly full grown.

I visited San Diego on the 17th and 18th of December, and with W. R. Gunnis, county horticultural commissioner, inspected several places where colonies were put. The ladybirds have got a start here, and several orchards show their good work. The home orchard of Hon. Frank A. Kimball that was so seriously infested one year ago is now clean, and Mr. Kimball has distributed a great many colonies of ladybirds to his neighbors. We visited an olive orchard about three miles from Mr. Kimball's, where Mr. Gunnis placed a strong colony about six days previously. The twigs of these trees as well as the leaves were completely covered with young black scales. This will be a good orchard in which to collect ladybirds the coming summer, as there is an abundance of food for them.

On December 23d I visited an orange orchard in Ventura county with J. F. McIntyre, county horticultural commissioner. A colony of *Rhizobius ventralis* was placed in this orchard in October, 1893, and no trace of them could be found for over a year, when they showed up, and on my visit the larvæ as well as beetles were plentiful, besides a few *Rhizobius debilis*. Mr. McIntyre reports the beetles and larvæ as numerous in more interior districts upon lemon, apricot and olive trees.

On December 26th, with Judson House, county horticultural commissioner, I inspected an orchard at Riverside, where I liberated a colony of *Rhizobius ventralis* on September 21st and found the larvæ in various stages and on a number of trees away from where the colony was placed.

The orchards of M. C. Heminway and Chas. R. Hails, near Goleta, Santa Barbara county, were colonized in September, 1893; and during September and October, 1894, Prof. T. N. Snow of Santa Barbara collected from these and adjoining orchards thousands of these beneficial insects and distributed them throughout his county and also sent several large colonies to other districts. At present these orchards are free from scale.

Your own orchards are the most convincing proof of the great value of these ladybirds. The constant warfare against the scale, representing an annual expenditure of from \$3000 to \$5000 in your orchards alone, is now saved and your trees already show increased vigor. During the time I collected the *Rhizobius ventralis* in your orchard, the beetles were as plentiful as I ever saw the *Vedalia cardinalis* when the cottony cushion scale was being suppressed by that beetle. Over 1,000,000 *Rhizobii* have been collected in your orchards and distributed throughout the State, which will in a short time save thousands of dollars to the orchardists, besides increasing the vigor and productiveness of their trees.

I also examined the "steel-blue ladybird" (*Orcus chalybeus*) colony at Los Angeles. While this ladybird does not increase so rapidly, nevertheless it has done very good work. The lemon and orange trees where they were placed now present a very marked improvement in growth and freedom from red scale. The beetles appear to be as plentiful in an adjoining orchard. The months of June and July are when this beetle shows up in greatest numbers. I would advise that they be not disturbed for at least another season.

THE FIELD.

Alfalfa in Colusa County.

J. B. De Jarnette, Colusa.—I have had eleven years' experience with alfalfa, and have about 100 acres bordering on the Sacramento river. The soil ranges in depth from ten to twenty feet, and rests on a clay subsoil, while water is reached at a depth of from twelve to twenty feet. In sinking two wells on my place, the soil was found as follows: First twelve feet, decomposed vegetable matter; four feet of quicksand; four feet of clay loam; four feet of hardpan; sixteen feet of yellow clay; six feet of hardpan; two feet of black sand, and, at forty-eight feet, coarse gravel. The ground should be thoroughly pulverized—the finer the better—after plowing at least twelve inches deep, and then seeded with not less than twenty-five pounds of seed to the acre. I have had the best results from sowing in the early fall, immediately after the first rains, using the "Gem" seeder, harrowing in with very light harrow, and rolling the ground well. The first crop is usually quite weedy, and of little value, but the second is better, producing one and a half tons of hay to the acre, if the stand is good. Stock of all kinds should be kept off the first year. There is no danger here of winterkilling, and by the second year the full yield is realized. The length of time the plant continues vigorous depends on the treatment. If pastured extensively, it will require to be reseeded in from five to eight years; but otherwise it may go considerably longer. I invariably obtain three crops a year, averaging per acre for the first two and one half, and the others one and one half to two tons. I irrigate only in the winter, when the river is bank full, and I can turn in water from it. Alfalfa produces the best results with irrigation after each cutting, and

in that case there are five to seven cuttings obtainable, where with winter flooding I secure the three only. I mow for hay as soon as the bloom begins to develop, raking in the afternoon following the morning cutting, commence hauling about the third day after, and then put in the barn with plenty of salt. The third crop is given the preference for seed, and is harvested when the plant is well matured. I let it cure in the windrows and haul to the thrasher, handling as little as possible. The common yield of seed is from 100 pounds up, and according to the stand. The cost of my hay, on land worth \$100 to \$150 per acre, does not exceed \$2 per ton, and it sells for from \$5 to \$8, while seeds brings from eight to sixteen cents per pound. The hay after thrashing is of little value. The pasturage is unquestionably the most profitable I have ever had any experience with, supporting more stock of any kind to the acre than any other forage plant. In early spring, cattle are likely to bloat on the rank alfalfa, but after the first of June I have had no trouble. There is no special difficulty in ridding land of the plant, and it is undoubtedly as good for fertilizing as red clover or any other plant.

C. P. Wilson, *Grand Island*.—I have had twelve years' experience growing alfalfa, with sixty acres, on upland with loam surface, the subsoil being also a sandy loam. Water is found at twenty feet. In summer, the soil is dry to a depth of four feet. In preparing ground, it should be well pulverized; use fifteen pounds of seed per acre, broadcast, in early fall. Mow often, to keep the weeds down. If irrigated in summer, two or three tons of hay can be cut the first year; if not irrigated, only one ton. Alfalfa is not liable to winterkill. I irrigate once or twice during the season, in June and August, after mowing or pasturing it closely, with about twelve inches of water. Irrigation water is obtained from a stream with a "Herald" steam pump, run by a sixteen horse-power engine; the pump throws 350,000 gallons per hour (a foot deep on an acre). Alfalfa that is not pastured needs no more water the first year than the years following, but if pastured, much more is needed than in succeeding years. After the first year, I obtained six cuttings of one and one-half each, or nine tons for the season. Cut for hay when the first blossoms appear, and for seed, when it is ripe. In this country, the first crop is cut for seed. The best treatment of the seed crop is to cut and stack while the dew is on in the morning. In good, dry weather, rake after the mower, put up in small cocks, and let it stand from three to five days. It is not liable to heat or mold. The total cost in the stack is about \$2 per ton. Land is worth \$60 per acre. The cost of baling is \$2 per ton, the most convenient bale being 125 pounds. The usual yield of seed is 400 pounds per acre; expense of thrashing and cleaning, 40 cents per bushel. The ordinary thrashing machine is not satisfactory without some changes, and an experienced man in charge. Hay averages \$6 per ton and seed \$4.50 per bushel. Alfalfa is a profitable pasture for any kind of stock. Cattle and sheep unused to it as pasturage will bloat on it when wet from rain or dew, but never when dry. As a remedy, I stand them with head up hill and pour down a half pint of coal oil; as a preventive, tie a stick in their mouths one and one half inches in diameter. I consider the irrigated alfalfa superior in every way and for all purposes. If pastured, it will continue vigorously for ten years, and if not pastured it will never require reseeding. It is not difficult to rid land of alfalfa.

H. B. Turman, *Colusa*.—I have had eight years' experience in growing seventy-five to 150 acres of alfalfa on sandy, river-bottom land, the subsoil being sandy, made from Sacramento river overflowing. An abundance of water is found twenty feet from the surface. Land for alfalfa should be in good tilth; we sow thirty pounds of seed per acre, the first of April, with a "Gem" seed sower; cover one inch, with harrow made of brush. Cut it twice the first year to keep the weeds down. My land is between the levee and river, and irrigates itself when the river comes up with winter rains. Running water will not kill alfalfa; have had mine overflowed for thirty days. Some parties here irrigate by pumping from the river. More water is needed the first year than in later years. After the first year, I cut from three to five times; have obtained ten tons per acre when cutting four or five times. Cut for hay just as it begins to bloom; many make a mistake by letting it get too old. Have had but little experience with seed. Alfalfa hay should cure six to eight hours before raking; stack with a derrick, and salt well. In stack, it costs about \$1 per ton, from land valued at \$80 to \$100 per acre. Baling costs \$3 per ton; size of bale has nothing to do with its keeping. The price of hay has averaged \$6 per ton; seed, 8 cents per pound. I know alfalfa to be fine for milch cows, beef cattle, swine, or any other stock. It is profitable for horses and sheep. Alfalfa must either have irrigation or very damp soil. The thrashed straw is worth about one-half as much as hay. It is good and profitable after the first year; after the second year; look it over and sow ten to thirteen pounds to the acre, to keep up a good stand and yield. It has proved very profitable. Like other crops, it must not be abused by pasturing when the ground is wet. The first crop should be cut, never pastured. Every farmer who raises it here makes money.

THE STOCK YARD.

Notes on Live Stock Values.

TO THE EDITOR:—After attending the recent sale of show horses at the Mechanics' Pavilion in San Francisco, I find it interesting to compare prices obtained for the best specimens of horse flesh offered on that day with those obtained at some of the English sales of Hackney and draft horses in 1894, which, though good there, must be anything but encouraging, by comparison, to breeders and importers of the same in this part of the world.

At a sale of Hackneys belonging to the Prince of Wales, fifty head sold for an average of \$640 each, the highest price being \$2360, which was paid for a brood mare, the next highest being within \$100 of that figure.

At another sale of forty-five head of Hackneys belonging to Mr. F. Kelly, near Sheffield, in the county of Yorkshire, an average of \$549 was obtained; the highest priced animal at this sale also was a brood mare, which sold for \$3175. I have at hand the prices of only two other Hackney sales, and they rank among the lower priced ones. Such prices would, however, be considered very good here. One hundred and eight head were sold at these two sales for an average of about \$233, with prices ranging as high as \$1800 for a single animal. Then, how do prices here compare with those for which draft horses sell in England? Very unfavorably, I fear.

About an average sale as to prices is one where twenty-eight head of Shire horses were sold for an average of \$320, the highest priced animal in this sale being no more than \$445, which shows that there was nothing sensational in the prices obtained. A sale somewhat above the average was held at Nyn Park in the last week of November, when thirty-one animals sold for an average of \$554 each. The sale included six yearling colts and four yearling fillies, also two foals of each sex, so that more than one-third of the animals were under two years old. The highest priced animal, again a brood mare, sold for 580 guineas, equal to \$3085. A two-year-old filly sold for \$1500 and a three-year-old for \$1575, while a colt of the latter age brought the same figure. These are not by any means the highest prices that draft horses have been sold for of late years in England and Scotland, yet they are high prices when compared with such prices as could be obtained in California even if we had the same class of animals offered; but they are not here, neither are they likely to be till some degree of confidence is restored in the draft-horse business, which will not be till paying prices can be obtained by breeders.

SHEEP SALES.

Among other sale reports is one of the only flock of Merino sheep in England, which was descended from a consignment obtained from Spain by King George Third, sometimes called the "Farmer King," with the object in view of helping the agriculturists to obtain a class of sheep that would yield the best quality of wool, but the breed never found favor as the other breeds were more suitable to the needs of English farmers. The bulk of the animals sold in the sale referred to were bought for exportation to the Cape of Good Hope and Australia, a few going to France. There were 214 head (including 66 lambs) in the flock, which sold for an average of \$16, which is probably more than they would have sold for in California at the present time. The highest price paid for a single animal was \$68 for a yearling ram. At the same time we find that a ram lamb of the Shropshire breed sold for as much as \$260 at auction in England. The highest price paid for a sheep this year, so far as I know, was for the Vermont-bred Merino ram Golden Drop, at the Sydney annual stud-sheep fair, where this animal sold at auction for 500 guineas—a sum equal to \$2625, reckoning \$5 to the pound sterling. Golden Drop is said to have been the best Merino ram ever imported into Australia. At the same fair a Tasmanian-bred, long-wool ram sold for \$1385. This class of sheep, and also Southdowns, are said to have brought better prices than in 1893, which may be accounted for by the increased demand for a class of sheep suitable for the trade in frozen mutton, of which so much is now exported to England. This trade calls for a good plump carcass of meat, with round, thick thighs or "legs of mutton," good loins and a shoulder thick enough to yield to the carver a good slice when it comes to the table.

CATTLE TRANSACTIONS.

Turning now to cattle, we find the same conditions prevailing in regard to comparative prices as in horses and sheep. Ask a man \$200 for a bull here and, however good the animal, he would be apt to mark you down as one bereft of his proper senses; yet there were five sales of Shorthorn cattle in England, and one in Scotland, that made an average of over \$200 a head, including calves; a total of 312 animals being sold in the six sales, an average of fifty-two for each, so that they were not by any means small lots of cattle that brought these prices. The largest number was sold by the estate of the

late Hugh Aylmer, of West Derham, whose herd was favorably known wherever good Shorthorn cattle were known. Ninety-one head were sold at an average price of \$208, which included young calves, as before stated. Mr. Aylmer's cattle were chiefly, if not altogether, of "Booth" blood. Of different breeding was the herd of the late Earl Bective, whose herd of fifty-seven head made an average of \$229.50. This herd consisted principally of "Bates" blood, the late Earl being one of the buyers at the New York Mills sale in 1873, when he bought the Tenth Duchess of Geneva for \$35,000 (in currency), a purchase, I believe, that he never had occasion to regret, however large the price may appear to be at this time.

One of the most remarkable sales of the year was the Scotch sale referred to—Mr. Duthie's, of Collynie—where thirty bull calves sold for an average of \$247 each. The sale was made up of seventy-four animals, that brought an average (the above named bull calves included) of \$202.50.

There is one sale below the \$200 average that I wish to notice, viz: that of Mr. W. J. Edmonds, of Southrop, who had been breeding Shorthorns for forty years. One of the only two Shorthorns that sold for over \$1000 in 1894 at public auction, was a yearling roan bull that brought \$1075 in this sale, when eighteen bulls and bull calves sold for an average of \$206, the total of seventy-one animals in the sale averaging \$186, which prices go to show that the breeder of milking Shorthorns and his work is appreciated, as well as the cattle themselves, in their own country as much as if not more now than they ever were, especially when the animals are of the strong, healthy and milking looking kind that these are said to have been.

SOUTH AMERICAN PROGRESS.

A number of animals, including the highest-priced bull, were bought for South America; not only in Mr. Edward's sale, but in several other sales were a number bought at good prices for that land of low-priced beef, but, so far as I know, though I may be at fault, only one was bought at auction for the United States, and that a white heifer, a descendant of an exported cow bred by the late Abram Renick of Kentucky, and now this heifer comes to what is practically the same herd of "Rose of Sharon" cows from which her maternal ancestor went, and is, in all probability, bought with a view to breeding a bull, for future use, that has an infusion of the blood of English bulls in his veins. The use of a bull so bred, being of the same family as the cows he is to be used upon, introduces fresh blood into a herd without the danger of impairing the family likeness, such as is said to have existed in the late Mr. Renick's herd. The animals of which it was composed were described to me once by a good judge of Shorthorns as being "a wonderful herd, the cows are as like each other as so many peas."

Now, some may wonder why they buy high-priced bulls for exportation from England to Chile, Buenos Ayres and some other parts of South America, seeing that the price of beef is so low in these countries. We may rest assured that it is not for the gratification of a mere fancy, to be taken up for awhile because it is the fashion, and then to be let go when people get tired of it. Such things have happened more than once in California on the introduction of any breed new to the State, when a few rich people would buy high-priced cattle, as a pet fancy, to be let go as soon as they got tired of it, and had found by experience that there was not as much money in it as they expected. Such men don't make cattle breeders. To be a successful breeder of live stock for any length of time, a man must consider, and have a greater liking for the animals than for the money they are likely to make him. Not that he ought not to try all he can to make a financial success of the business; he would be in the wrong if he did not.

THE BEST CATTLE PAY BEST.

The South Americans have undoubtedly found out that much—and more. For that reason they want a class of cattle that will make the best returns for the food consumed. The cattle they are buying and importing have been bred for generations with that object in view. The rapid assimilation of food insures a quick growth, early maturity and quick returns in both beef and dairy cattle. Hence comes a profitable improvement in the use of good, well-bred bulls. By well bred and good pedigrees I mean animals that have an unbroken succession of good animals in their lineage for several generations back, such as have been bred and used by breeders who have made a name for themselves and their cattle, who would never use an inferior beast for breeding purposes, or even an animal that was good in itself, if its sire and dam were not good, sound, healthy cattle. "I think naething of your bull, noo; he's got nae mother," said a Scotchman after seeing the dam of a good looking bull that had been shown to him, and he was right. The introduction of a cross, whether of an inferior animal or of one that is of a lower standard in both blood and breeding, is like putting a weak link into a chain intended to carry a certain weight. It will not stand the test required of it.

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THE HOME CIRCLE.

Send Them to Bed with a Kiss.

O, mothers, so weary, discouraged,
Worn out with cares of the day,
You often grow cross and impatient,
Complain of the noise and the play;
For the day brings so many vexations,
So many things going amiss;
But mothers, whatever may vex you,
Send the children to bed with a kiss.

The dear little feet wander often
Perhaps from the pathway of right;
The dear little hands find new mischief
To try from morning till night;
But think of the desolate mothers
Who'd give all the world for your bliss,
And, as thanks for your infinite blessings,
Send the children to bed with a kiss.

For some day their noise will not vex you,
The silence will hurt you far more;
You will long for their sweet, childish voices,
For a sweet childish face at the door,
And to press a child's face to your bosom
You'd give all the world for this;
For the comfort 'twill bring in your sorrow,
Send the children to bed with a kiss.

—National Stockman and Farmer.

A Dream.

There are times when a dream delicious
Steals into a musing hour,
Like a face with love capricious
That peeps from a woodland bower.
And one dear scene comes changeless,
A wooded hill and a river,
A deep cool bend where the lilies end
And the elm tree shadows quiver.

And I lie on the brink there dreaming
That the life I live is a dream,
That the real is but the seeming,
And the true is the sun-flecked stream.
Beneath me the perch and the heaven sail by
In the dim cool depths of the river.
The struggling fly breaks the mirrored sky
And the elm tree shadows quiver.

There are voices of children away on the hill,
There are bees through the flag flowers humming,
The lighterman calls to the clock, and the mill
On the farther side is drumming,
And I sink to sleep in my dream of a dream
In the grass by the brink of the river,
Where the voices blend and the lilies end,
And the elm tree shadows quiver.

Like a gift from the past is the kindly dream,
For the sorrow and passion and pain
Are adrift like the leaves on the breast of the stream,
And the child life comes again.
Oh, the sweet, sweet pain of joy that died!
Of a pain that is joy forever!
Oh the life that died in the stormy tide
That was once my sun flecked river!

—John Boyle O'Reilly.

A Pair of Bloomers.

Before bicycling became a craze with women there had never been even so much as a shadow of a quarrel between Mr. and Mrs. Cranston. But after Mrs. Cranston bought a bicycle and learned to ride well, there was a disagreement which came very nearly breaking up a happy home. They had been married three years, and they had often said that their married life had been one long honeymoon.

Tom had yielded so readily to all of his wife's whims that she had unconsciously gained an opinion that her word was to him like the laws of the Medes and the Persians.

But this idea was all knocked to pieces when one morning as they sat at breakfast Mrs. Cranston said:

"Tom, I'm going to order my dress-maker to make a suit of bloomers for me to-day. I do so much bicycling now that the skirts are too heavy for me."

"What!" shouted Tom, dropping his spoon in the oatmeal and spluttering milk all over his necktie, looking at her as though she had announced that she was going to commit suicide.

Mrs. Cranston also dropped her spoon and looked in surprise at her husband.

"I said," she repeated, "that I was going to get a bloomer suit. What strikes you as particularly strange about that?"

"What strikes me as particularly strange?" he repeated, with a wild look in his eyes. "Do you think for one moment that I will allow my wife to race around town looking like a lithograph of a variety entertainment? Not much."

"But, Tom," said Louise in a tone that had never failed to persuade her husband that she was right and that he was wrong. "I don't see why I can't have bloomers. Mrs. Kynaston and Mrs. Bentley and Mrs. Jennings all

wear them and their husbands don't object, so why should you?"

"It makes no difference why I should," said Tom doggedly. "I don't intend to have my friends on the exchange coming to me and saying: 'Tom, I see your wife's wearing bloomers.' Not if I know it."

"But, Tom," she began, "I—"

"Oh, don't talk any more nonsense, Louise," he broke in. "I am sick of it. You shan't wear bloomers, so that settles it," and Mr. Cranston, whose appetite had been taken entirely away by his wife's announcement, got up from the table and started for the door.

"Good-by," he called from the hall, and then the door slammed and Louise sat at the breakfast table wondering how it was that she had never before known that her husband had a will of his own.

She had told all of her friends only the day before that she would be wearing bloomers within a week, and when they had suggested that her husband might object, she said:

"What! Tom object! Why, he never objects to anything."

And now Tom had absolutely refused to allow her to wear them, with a facial expression which showed that he would not stop short of the divorce courts to prevent it.

Finally she arose from the table and went to her room.

She had an idea which she thought, if properly carried out, would gain Tom's consent to the wearing of bloomers. She wrote a hurried note to her dressmaker ordering a bloomer suit of a pattern which she had already selected, and then donned her old bicycle suit to pay a call on Mrs. Kynaston, who had a husband who did not object to bloomers.

She told her troubles to the vivacious Mrs. Kynaston, who was not sparing in her sympathy for the poor friend who had a narrow-minded husband who objected to a convenient bicycle dress.

"Why, how foolish of him," she said. "I don't believe the poor man has ever seen a proper bicycling costume. I'll tell you what we'll do. We'll all go bicycling this afternoon, and come back by your house at just the time your husband gets home, and he will see what a bloomer suit looks like."

And so the bicycle party was arranged, and when Thomas Cranston arrived at his house that evening he saw five women riding in front of the house, and four of them were in full bloomer costume. The fifth, who wore skirts, was his wife.

He was not so badly shocked as he thought he would be, and he wished that he had not been so decided in his refusal of his wife's request, but he made up his mind that it would be unmanly to yield after his remarks of the morning, and so with a bow to his wife and her companions he went indoors and began to dress for dinner.

That night Louise again broached the subject of bloomers, but her husband silenced her by saying:

"Now, see here, Louise, don't speak to me about bloomers again. You may go in for women's rights if you like, and you may wear standing collars and men's waist-coats, but you shall not wear trousers even if bicycling does justify it in your eyes."

"Trousers!" cried Louise, indignantly. "who said anything about trousers? I was talking about bloomers."

"I know you were," said Mr. Cranston, "and please don't talk about them any more. I'm tired of it, and won't hear it mentioned again."

The next morning when Mr. Cranston put on his coat to start for his office his wife called him back and said:

"Tom, I'll promise you never to mention bloomers again, but if you ever change your mind about them please tell me, for I'm really very anxious to wear them."

The smile which for twenty-four hours had been absent from Tom Cranston's face came again, and he kissed his wife.

"That's a dear, good girl, Louise," he said. "I hated to refuse your request, but really I don't like the idea of your wearing those things. And

now, if there is anything else you want me to do for you just name it and I'll do it."

He went away, but returned in a moment and called out:

"Oh, Louise, I'm going to a dinner at the club to-night, and I want you to have my dress suit handy when I come home. Good-by."

"Now, then," said Louise as she went upstairs, "I'll see if I can't make Mr. Tom change his opinion about bloomers. That promise of his was the very thing I wanted."

The hour longed for by both came at last. Tom entered the house and rushed to his room to put on his dress suit.

"Oh, Tom!" Louise called, while he was dressing, "come down here; I want you to redeem your promise of this morning, and do me a favor."

"All right!" he called; "I'll be down in a minute, and I'll keep my promise."

He found his wife sitting on the floor with a dress pattern in front of her, and dress goods scattered all around.

"Well, what's all this?" he asked. "Are you making a rag carpet? What is it you want me to do for you? If it's to clean up all this mess here I shall refuse, for I have some work to do next week."

"No," she said, laughing. "I don't want you to clean up the mess, and I'm not making a rag carpet. I'm making a bicycle dress, which I must have early to-morrow morning, and I want you to let me drape the skirt on you so that it will hang all right."

"But, Louise," he objected, "I've got to go out to that dinner at eight o'clock, and it's now nearly seven. I won't have time. Let the dress go for to-night."

"I can't let it go, for I must have it

to-morrow morning," she insisted. "You've promised to do what I asked, and now when I want you to do a little thing like this you refuse, and I think it's real mean."

Mrs. Cranston stood up holding a pattern in one hand and an unfinished dress in the other, and looked as though she were about to burst into tears.

"Oh, come now, Louise," he said impatiently. "Can't you see that your request is trivial and unreasonable, and I must go to that dinner?"

The tears that had seemingly been held back with such an effort now became visible and rolled down her cheeks.

"I think it's mean," she sobbed. "You promised to do anything I wanted you to, and now you won't keep your word. I've cut up my other dress, and the bicycle party is of just as much importance as your old dinner."

Mr. Cranston looked grave. He did not want to lose that dinner, and he did not want to break his promise.

"How long will this fitting business last?" he questioned, after several moments' silence, broken only by the sobbing of his wife.

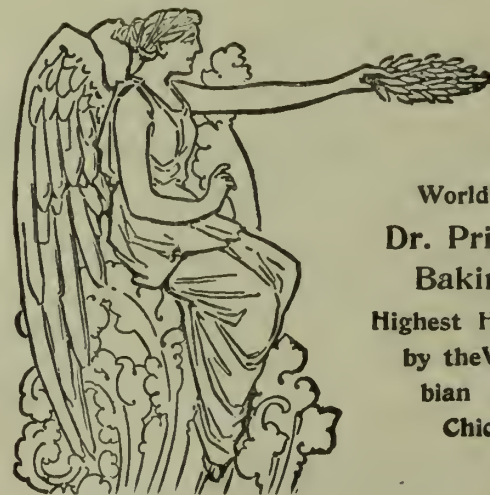
"About half an hour," she replied, brightening up a little.

"Well, then, hurry up," said Cranston, throwing off his coat and standing erect. "Bring the thing here."

And so the gown was put on Mr. Cranston, and Louise dropped on one knee and began pinning the draperies in a hurried manner.

"You see, Tom," she said, as she tucked up the first fold and surveyed it with a critical eye, "this is of the greatest importance to me, and I know you will help me out."

"Um," was the only answer her husband made. He was looking straight



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This verdict conclusively settles the question and proves that Dr. Price's Cream Baking Powder is superior in every way to any other brand.

NOTE.—The Chief Chemist rejected the Alum baking powders, stating to the World's Fair jury that he considered them unwholesome.

at the clock, and wondering how it was that the minute hand was moving so fast.

He thought the clock must be out of order. He pulled out his watch and saw that the minute hand moved with the same railroad speed, and it was 7:30 o'clock.

"Are you anywhere near through?" he asked impatiently.

She shook her head and turned her attention to the dress. Tom fumed as he noticed that it was now 7:45.

"Have you any idea how soon you will be through?" he asked with a forced calmness.

"Not the slightest," she replied in a voice that was either muffled by pins or laughter. Tom couldn't tell which, for she was stooping and studying the hem of the dress.

At that moment the door opened and Mr. Kynaston, the husband of Mrs. Cranston's bloomer-wearing friend, threw open the door and stood gazing in open-mouthed astonishment.

"Why, Tom," he said, "I thought you were going to call for me if you left downtown first? You know you told me so, and said if I got ready first I was to come here and walk right in. Are you going to the dinner?"

"This will be all over the exchange to-morrow," groaned Tom inwardly. "Yes, I'm going to the dinner if Louise ever gets through with this miserable skirt," he added, aloud.

"Oh, nonsense, why don't she wear bloomers? Come on. We are late already," said his friend.

"Louise," whispered Cranston, "if you'll call my promise off you may have bloomers or anything else you want."

"Oh, you dear, good boy," cried Louise, with well-feigned surprise. "Go to your dinner. Now, hurry up, or you'll be late."

Then Tom, after kissing her good-by, rushed off to the club.

Louise put on her bonnet and went to Mrs. Kynaston's house.

"Katie," she cried, as her friend welcomed her at the door, "I'm to have bloomers."

And then she told the story of the manner in which her husband had been induced to change his mind.

And she said in conclusion: "I bought the bloomers yesterday, and I'll wear them to-morrow."

"You really cried, did you?" asked Mrs. Kynaston. "Well, Louise, if you went in for woman suffrage we would have it in twenty-four hours. Talk about men's executive ability! Why, I believe you could make your husband wear bloomers himself."

"ONCE in New England I was driving with an old farmer, and some of the men of the neighborhood came under criticism. Speaking of a prominent man in the village, I asked, 'He is a man of means?'"

"Well, sir," the old farmer replied, "he ain't got much money, but he's mighty rich."

"He has a great deal of land then?" I asked.

"No, sir, he ain't got much land, neither, but still he is mighty rich."

"The old farmer, with a pleased smile, observed my puzzled look for a moment, and then explained.

"You see, sir, he ain't got much money, and he ain't got much land, but still he is rich, because he never went to bed owing any man a cent in all his life. He lives as well as he wants to live, and he pays as he goes; he don't owe nothing and he ain't afraid of nobody; he tells every man the truth, and does his duty by himself, his family and his neighbors; his word is as good as a bond, and every man, woman and child in the town looks up to and respects him. No, sir, he ain't got much money, and he ain't got much land, but still he is a mighty rich man, because he's got all he needs and all he wants."—The Outlook.

The two chief things that give a man reputation in counsel are the opinion of his honesty and the opinion of his wisdom; the authority of those two will persuade when the same counsels uttered by other persons less qualified are of no efficacy or working.—Jonson.

Grandpa and the Dog.

"A young girl of my acquaintance," says Dr. Galen Wilson, "keeps house for her grandfather, who is a farmer. She has a Scotch collie dog which she can send to call her grandpa to his meals, or bring him to the house at anytime, no matter in what part of the farm he may be. All she needs to do is to point in the right direction, and say to the dog, 'Go and bring grandpa.' With a bark to let her know that he understands the order, he bounds off as fast as his legs can carry him, finds the object of his search, jumps up against him, and continues to do so until the man starts for home. He does not leave him and hurry home, but comes along with him. Reaching home, he barks at his mistress in apparent triumph, as much as to say, 'I have brought him.' If he meets grandpa in the fields upon any other occasion, he does not jump against him as when sent especially for him. The dog was trained to do this as follows: Grandpa was in the barn one day, with the door open, and so the girl could see him. She told the dog, 'Go and tell grandpa to come to dinner.' The latter heard it, and when the dog came, he said, fondling him, 'Did you come for me, Colonel?' The dog jumped against him, barked, and seemed much pleased, and proceeded with him to the house, when he was immediately rewarded with something to eat. Then grandpa and the girl came to an understanding to improve upon this, until now the dog will find him, not only anywhere on the farm, but at other places, a mile away, where grandpa is in the habit of going. For this purpose he is better than any boy. He goes quicker, and never stops to play by the way."—The Evangelist.

Gems.

To love our neighbor as ourself is such a fundamental truth for regulating human society, that by that alone one might determine all the cases in social morality.—Locke.

It is better by noble boldness to run the risk of being subject to half of the evils we anticipate than to remain in cowardly listlessness for fear of what may happen.—Herodotus.

The whole art of making a good speech is to have something pertinent and moving to say, to say something all the time, to say it vivaciously, and if it is religious speech, to say it with religious feeling, and to stop when every one wishes you to go on.—J. M. Buckley.

DOMESTIC ECONOMY.

Hints to Housekeepers.

It is said that cucumber peels will kill cockroaches.

Wood ashes are excellent to clean discolored table ware.

To remove egg stains on silver, rub with salt on a damp cloth.

Steel knives may be cleansed by rubbing with a raw potato dipped in fine brickdust.

For nausea scorch some rice, pour boiling water over it, and drink as hot as possible.

Some people claim that a very delightful zest is added to a cup of tea, especially if it is sugared, by a little juice of a lemon.

Rub your stoves and stovepipes which are to be put away for the summer, and also the nickel plate on the stoves and other pieces, with kerosene.

Instead of keeping ice in a dish, where it will quickly melt, tie flannel loosely on the dish so that it drops into the bowl, and keep the ice in a flannel bag.

This is the proper way to peel tomatoes: Cover them with boiling water half a minute, then lay them in cold water until perfectly cold, and the skin can be peeled off without difficulty, leaving the tomatoes unbroken and as firm as they were before being scalded.

Cleanse light summer woollens which are easily soiled, with finely powdered French chalk. The soiled parts should be thickly covered with the chalk, which should be allowed to remain for one or two days, and then removed with a camel's-hair velvet brush. In most cases this treatment will cause the spots to disappear.

When the hands lack softness, glycerine and oatmeal are sometimes very useful. Rub the hands first with pure glycerine, but if this is irritating dilute it with one-half its bulk of rose water. Dip the hands freely in the oatmeal and put on gloves. This will finally soften the most obdurately hard hands. Our grandmothers used to use bran in very much the same manner.

A novelty has recently appeared at Chemnitz in the shape of hosiery, the new idea being to make it possible to repair hosiery so that it will appear as if new. To this end, fast seams in the mesh are made across the toe, ankle and heel. If, therefore, a hole appears in the toe, it is cut off and a new one attached, which is easily and quickly

done by hand, the seams appearing practically the same as when new. In like manner the heel is repaired, or in case of "general debility" the whole foot can be removed by cutting it off at the ankle. In order to make it possible for all to repair their own stockings, it is the design of the manufacturer to furnish with every dozen pairs of hosiery one dozen extra pairs of feet, three dozen pairs of toes and three dozen pairs of heels.

WHITE SAUCE.—Infuse in a pint of boiling cream the peel of one lemon, half an ounce of white pepper corns, some thyme and a bay leaf, leaving them in for half an hour. Melt three ounces of butter and stir in two ounces of flour, fried without coloring, add the prepared infusion, straining through a fine sieve, and the juice of a lemon. Set the saucepan on the fire and stir well till it boils, then leave it for a few minutes and incorporate into it three ounces of fine butter.

WHITE FRUIT CAKE.—Three-quarters of a pound of butter, one pound of sugar, a scant pound of flour, ten eggs, one nutmeg, the grated rind and juice of one lemon, one pound of almonds; shell and blanch the almonds and cut very thin.

Feminine.

She (coyly)—Am I the only girl you ever loved?

He (confidentially)—Well, no, my dear. I can hardly say as much as that; but you are the only girl I love at present.—Somerville Journal.

"My wife," said young Mr. Fitts to a group of others of his ilk, "takes it as an insult to her sex if I make unkind remarks about any other woman, and as an insult to herself if I make kind ones. What the deuce is a fellow to do?"

The oldest married man in the party advised him to do nothing.—Indianapolis Journal.

"I've been pondering over a very singular thing."

"What is it?"

"How putting a ring on a woman's third finger should place you under that woman's thumb."—Life.

The Bachelor—Do you let your wife have the last word?

The Married Man—Do I let her? Young fellow, when you've been married a year or two you won't ask such a question as that.—New York Press.

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FLORIST AND GARDENER.

The Carnation.

Read by F. A. MILLER, of San Francisco, at the last meeting of the State Floral Society.

The charming flowers of carnations were at one time universal favorites, and attracted more attention than any other flower up to about 1850; prior to that time more varieties were known than at present. The reason for neglect is certainly unaccountable; however, since in 1885 the carnation once more began to assume its old place, and now bids fair to become more popular than ever. At the present time over 200 varieties are cultivated in this country, and new varieties are constantly being produced by fertilization, and no doubt the near future will show such improvements that it will be a fair rival to the rose and attain more popularity than the chrysanthemum.

The actual work of cross-fertilization of the carnation was begun so much later than that of the rose and chrysanthemum that we may profit a good deal from the experience with the latter in the improvement of the former.

Layers and Cuttings.—Propagation of existing varieties may be effected by layers or cuttings, while new varieties are produced from seed. The propagation by layers is readily accomplished. The best time for this method is July and August, although it may be done successfully at almost any time in this climate. The layers will generally root in four or five weeks. The operation is simple: Select a stem with partly old and partly young wood; make a slit with a sharp knife at the base of the young wood upwards, extending through a joint or two, so as to form a tongue; peg down the layer rather firmly and add sufficient light, sandy soil to cover the incision to the depth of an inch or two, and keep the ground moist.

The propagation by cuttings is practiced generally. The cuttings are made of young wood, and long enough to have a firm base; insert them firmly in clean sand and cover with a sash in a shaded position, or with thin cloth. The cuttings may be made with a heel or cut just below a joint; they should be well watered after planting, but too much dampness must be avoided.

Seedling Carnations.—The raising of carnations from seed is a most satisfactory way and very interesting. Much, of course, depends on the quality of seeds and the manner in which the seed was obtained. Most of the seed sold is not hybridized artificially, and in this case no great results can be obtained from that source. Carefully hybridized seed is too expensive to be retailed, and can only be bought by the 100 or 1000 seeds. Any one who has a collection of good carnations can readily produce seed, by proper hybridization, which will give excellent results in the production of new varieties, and, furthermore, it is one of the most fascinating pastimes any one can engage in. In the East many amateurs and practical florists are now engaged in the raising of seedling carnations, and many of them would no doubt engage in this pleasant experiment if they knew how. Looking at your flowers, you will find some showing the pistils very prominently; these are the pistillate or female parents. Then we find other flowers which show the stamens very conspicuously; these furnish the pollen with which the pistillate flowers are fertilized. The pollen will readily adhere to a fine, soft brush and is then applied to the pistillate parent of any other flower. If this operation is performed between flowers of a most contrasting color quite a variety may be obtained, and if the operation is performed between flowers of the same color, superior varieties of that color may be obtained. I may mention here that Mr. Carl Kruger has hybridized lately most of his best carnations, and he has now a fine lot of young seedlings which will come into bloom the coming summer. I fully expect some good things from his effort in this direction.

In case you have no collection of car-

nations to experiment with, and you are anxious to have a collection of good varieties, then you must rely on obtaining the best quality of hybridized seeds from dealers. I have now a fine lot of seedlings of that description. The seed was planted last spring and most of the plants show signs of flowering now. If I succeed in keeping them through the next three months, I will certainly be able to show some very good carnations. The best seed obtainable in this line will always produce ninety per cent double flowers, and many of them in such colors as are not offered for sale in nurseries.

I shall be pleased very much if every member of the State Floral Society will make an effort in this direction, and I am sure that the result will be very gratifying. For fifty cents about 100 seeds of the very best strain can be obtained from responsible European growers, and sure to give satisfaction.

Carnations in San Francisco.—The growing of carnations out of doors in San Francisco is not very satisfactory. Soil, fogs and injudicious watering have a great deal to do with our poor success; a few roots seem to do well for years, while others—yes, many others—have only a short existence. We have never looked seriously into the probable cause of these failures, but I think time will demonstrate what varieties can be grown satisfactorily and how to remedy the evil.

Seedlings I have found to do better here than most kinds raised from greenhouse cuttings. A carnation may be very satisfactory to the grower under glass, and yet may be very unsatisfactory if grown in the open air. Again, some carnations thrive well in sandy loam—yes, even in our common sand—while others seem to do best in heavy soil. At all events, the soil should be well drained. Excessive rains during winter, following continuous irrigation during summer and fall, are very dangerous to carnations if the soil is not well drained. All these circumstances and conditions, and many others which I have no time to mention now, should receive due consideration; and I repeat again that there is much to learn in carnation culture.

Appeal to Amateurs.—The interesting subject of hybridizing should receive more attention from our amateurs, who have more time to devote to such work than professional men, and I may justly say that a beginner in hybridizing may effect a cross between two varieties and, not knowing what the effect would be, may achieve a greater result than a professional who might experiment on a large scale.

The report on a recent exhibition of carnations in New York may be mentioned here. It says: "The display of carnations was this season decidedly pleasing, both to the management and exhibitors, as well as to the flower-loving public, and received frequent and deserved praise." The feature of the exhibit was the large number of seedlings, which showed decided improvement upon older sorts; and which shows a development of the carnation similar to what has taken place in the rose and chrysanthemum. With new and improved varieties, improved in habit, color, size of flower, strength of stem and fragrance, and with better and more intelligent culture, there is no reason why we should not have three or four—yes, five and six—inch carnations on stems ranging from two to three feet in length, as well as ten-inch chrysanthemums on four-foot stems. Variety and cultivation accomplished wonders for the chrysanthemum, and variety and cultivation, when understood, will accomplish wonders for the carnation as well.

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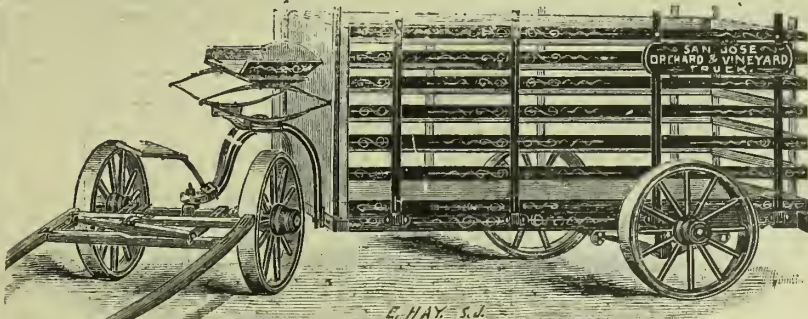
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Gilman's Patent Tule Tree Protector.

PATENTED AUGUST 1, 1893.

FIRST PRIZE—Medal and Diploma—California Mid-Winter International
Exposition.
Cheapest, best and only one to protect trees and vines from frost, sunburn,
rabbits, squirrels, borers and other tree pests.
For testimonials from parties who are using them, send for descriptive cir-
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Sole Manufacturer of Patent Tule Covers.

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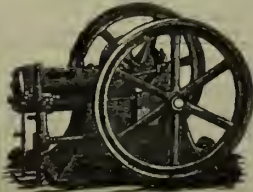
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Wouldn't it pay you to reduce this expense
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PLANET JR. Labor Saving Farm Tools.
Take for example the Planet Jr. Garden
Drill. A machine that costs nothing to
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Will you have it—IT'S FREE.
S. L. Allen & Co., 1107 Market St., Phila.**Weber Gas & Gasoline Engines.**

Simplest and most economical engines on earth.

FULLY GUARANTEED.

Requires only a few minutes' attention a day (Guaranteed
cost of running, 1 cent per hour per H. P.)**JOSHUA HENDY MACHINE WORKS,**

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COMPANY.**CHICAGO.....SAN FRANCISCO
BOSTON.....LOS ANGELES**Largest Handlers
of Dried Fruits.**If you have a parcel to offer, submit samples o
We are the principal handlers.**CALIFORNIA****Pure Food Exposition.**

MECHANICS' PAVILION,

January 28 to February 16, 1895.

Mrs. Mary J. Lincoln, author of the Boston
Cook Book, will lecture daily on cooking.

Concerts Afternoon and Evening.

Persons attending the Exposition will be able
to secure excursion rates by rail.

For particulars apply to

WILLARD B. HARRINGTON, Chairman,

123 California St., Room 2.

E. L. MAGUIRE, Manager.

DIVIDEND NOTICE.**THE GERMAN SAVINGS AND LOAN SOCIETY,**

526 California Street.

For the half year ending December 31, 1894, a
dividend has been declared at the rate of five (5)
per-cent per annum on Term Deposits and four and
one-sixth (4 1/6) per cent per annum on Ordinary
Deposits, payable on and after WEDNESDAY,
January 2d, 1895. **GEO. TOURNEY, Secretary.****MOORE, FERGUSON & CO**
WOOL, GRAIN, FLOUR✦ General Commission Merchants, ✦
310 CALIFORNIA ST., S. F.

Members of the San Francisco Produce Exchange

Personal attention given to sales and liberal
advances made on consignments at low rates of
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HOOKER & CO.
16 & 18 DRUMM ST. S. F.**TREE - WASH.**

Olive Dip.

**"Greenbank" Powdered Caustic
Soda and Pure Potash.****T. W. JACKSON & CO.**Sole Agents. - - - No. 226 Market Street
SAN FRANCISCO, CAL.**LIGHTNING WELL MACHINERY Works.**
LARGEST
All kinds of tools. Fortune for the driller by using our
Advantageous process, can take a core. Perfectly Econom-
ical Artesian Pumping Rigs to work by Steam, Air, etc.
Let us help you. **THE AMERICAN WELL WORKS,**
Aurora, Ill.; Chicago, Ill.; Dallas, Tex.**PILES.****BICURA TREATMENT CURES THEM.** Sent
postpaid for 50c. **BICURA CO., 310 California St.**
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PLATFORM SCALES**
HOOKER & CO. 16-18 DRUMM STREET, S. F.**DOUBLE
Breech-Loader
\$5.00.
RIFLES \$1.75
WATCHES****GUNS**BICYCLES \$15
All kinds cheaper than else-
where. Before you buy send
stamp for 60 page catalogue
POWELL & CLEMENT CO.
168 Wabash, Cincinnati, O.**PACIFIC RURAL PRESS**Is the Largest Illustrated and Leading Agri-
cultural and Horticultural Weekly of the
West. Established 1870. Trial Subscriptions, 60c
for 3 mos. or \$2.40 a year (all further notice). The
Pacific Rural Press, 220 Market, San Francisco.

Deep Snow.

The depth of snow on the high Sierras at this season of the year and after a heavy storm is almost incredible. Travellers through the mountains have observed with wonder shingles nailed upon the sides of trees from fifteen to twenty-five feet from the ground, and question whether the snow ever fell as deep as indicated by these shingles.

Mr. E. A. Halstead, who crossed the mountains many times for twelve successive years between Oroville and Quincy, says during the severe winter of four years ago snow fell to a depth of forty feet from Buckeye to the Toll Gate; that on one occasion the mail carrier, after a hard storm, crossed over the peak of the Buckeye House without seeing the building, although it reached a height of thirty-eight feet above the ground. The Letter Box hotel was so completely covered that it required thirty-two steps from the top of the snow down to the second-story window. For a distance of two or three miles in the vicinity of the Letter Box where the snow had drifted the banks were fully 100 feet deep. He noticed in one place where the wind had swept the snow from about the bole of a tree that it was fully ten feet down to one of the shingles to which we have alluded. He and others who were familiar with the snow that winter estimate that, had it been measured as it fell, it would have reached a depth of at least 140 feet.—Oroville Register, Dec. 27th.

Machinery of a Cruiser.

The extent and power of machinery construction are wonderfully exhibited in the working equipments of the latest Government cruiser. There are 61 separate engines, not counting cylinders, which would run up to 120, for main, auxiliary and pumping purposes. The low-pressure piston is 92 inches in diameter, and an area of 46 square feet and an initial load of 100 tons. The condenser tubes, if placed end to end, would form a tube 33 miles long, and the cooling water passed through these tubes equals 36,000,000 gallons per day, or enough to supply a large city with water. The main boilers, if placed end to end, would form a tunnel 156 feet long and large enough for a train of cars to pass through. The heating surface is equal to 1½ acres.

HORSE OWNERS should understand that their animals are peculiarly liable to injury from contact with electric currents. This is not due to the physical structure of the horse, but to other causes, some of which are in a degree preventable. The safety of a horse depends upon the skill of the blacksmith to some extent. The authority named points out that the shoes offer a large surface for contact and the nails conductors by which the current may enter the body, although the sole of the hoof itself is an insulator. The animal's weight aids the contact, and a wet fetlock increases the danger. Blacksmiths, therefore, should not drive the nails to the "quick" and the fetlocks should be trimmed.

An Eastern syndicate is prosecuting a survey in Kern canyon, and a party of twenty men is blasting out a trail, beginning about fifteen miles northeast of Bakersfield, the intention being to spend \$8000 or \$10,000 in a preliminary survey to determine the feasibility of developing electrical power there. It is expected that the survey will be completed by February 1st. C. N. Beal is in charge of the project. The California combination of dear fuel and unlimited water power makes an inviting field in the mining districts for the utilization of mountain streams in furnishing electric power.

I here put the case even at the worst, by supposing, what seldom happens, that a course of virtue makes us miserable in this life, but if we suppose, as it generally happens, that virtue would make us more happy even in this life than a contrary course of vice,

how can we sufficiently admire the stupidity or madness of those persons who are capable of making so absurd a choice?—Addison.

\$100 Reward, \$100.

The reader of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly on the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials. Address, F. J. CHENEY & CO., Toledo, O. Sold by Druggists, 75c.

A SCHEME has been proposed to reduce the friction of salt water against the sides of a steamer, which, it is claimed, will increase the speed forty per cent. It is to force air through the vessel's plates and thereby form a narrow space between the iron and water.

5/A HORSE BLANKETS
ARE THE STRONGEST.
Made in 250 Styles.
For either road or stable use.
All shapes, sizes and qualities.
WM. AYRES & SONS, PHILADELPHIA.



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THE GREAT REMEDY

CURES PAINS OF MAN & BEAST

Cover Your Barns,

OUTHOUSES, SHEDS AND DWELLINGS WITH

P. & B. ROOFING.

FOR FENCE POSTS, WATER TANKS, ROOFS, WOOD OR IRON,

P. & B. PAINT.

FOR POULTRY HOUSES, CREAMERIES, FLOORS AND WALLS,

P. & B. SHEATHING PAPER.

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BEAN SPRAY PUMP CO.

Are Headquarters for Complete Spraying and Whitewashing Outfits.

The Best Spray Pump, Best Spray Nozzles and Best Spray Hose.

Nozzles arranged to spray at any angle ordered.

THE BEAN CYCLONE NOZZLE—a new invention this season—is self-cleaning and throws a fine and penetrating spray.

The BEAN and NEW BEAN NOZZLES, so well known, are also our invention.

Bean Spray Pump Co.

Los Gatos, Cal.

POTATO-PLANTER

We manufacture the celebrated Aspinwall Potato Planter, Aspinwall Potato Cutter, Aspinwall Paris Green Sprinkler, etc. Every machine warranted. These machines greatly reduce the cost of raising potatoes. Send for Free Illustrated Catalogue.
ASPINWALL MANUFACTURING CO., 48 Sabin St., Jackson, Mich.
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School of Practical, Civil, Mechanical, Electrical and Mining Engineering, Surveying, Architecture, Drawing and Assaying
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SAN FRANCISCO, CAL.

Open All Year. A. VAN DER NAILLEN, Pres't.
Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. Established 1864. Send for Circular.

GRANGERS' BANK

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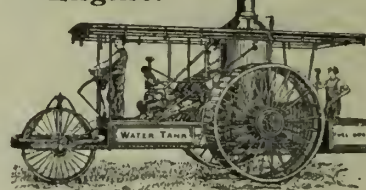
INCORPORATED.....APRIL, 1874



Capital Paid Up.....\$1,000,000
Reserve Fund and Undivided Profits, 130,000
Dividends Paid to Stockholders.... 832,000

—OFFICERS—
A. D. LOGAN.....President.
I. C. STEELE.....Vice-President.
ALBERT MONTPELLIER.....Cashier and Manager.
FRANK McMULLEN.....Secretary.
General Banking. Deposits Received, Gold and Silver. Bills of Exchange Bought and Sold. Loans on Wheat and Country Produce a Specialty.
January 1, 1894. A. MONTPELLIER, Manager.

Price's Traction Engine.



We have one of these engines that was used about one month last season and was taken back by us by reason of illness of purchaser. Engine is in perfect order, and in better working order than when first sent from the factory. A BARGAIN. Indicated power, 80-horse; Cylinders, 8x8; Wheels, 8 ft. high, 28 in. wide; weight, less than 10 tons. Price when new, \$4500.

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16 and 18 Drumm Street, San Francisco.

★ C. H. EVANS & CO., ★

(Successors to THOMSON & EVANS.)
110 & 112 BEALE STREET, S. F.

MACHINE WORKS,

Steam Pumps. Steam Engines.

All Kinds of MACHINERY.



HEALD'S

Business College,

24 Post Street, San Francisco.

FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils.

A Department of Electrical Engineering

Has been established under a thoroughly qualified instructor. The course is thoroughly practical. Send for Circular. C. S. HALEY, Sec.

THE LEAN ALL STEEL Harrow



Entirely of Steel. No castings to break. Strongest and simplest Lever Arrangement on the market. Write for descriptive Circular.
RODERICK LEAN MFG. CO.
No. 14 Park St., MANSFIELD, O.

HANG YOUR DOOR

WITH STANLEY'S
Corrugated Steel Hinges.
They are Stronger, Handsomer and cost no more than the old style. For sale by Hardware Dealers generally, but if not in your vicinity write the Manufacturers. Send for "Biography of a Yankee Hinge," mailed free.

THE STANLEY WORKS, New Britain, Ct.

S. F. MARKET REPORT.

Market Review.

SAN FRANCISCO, Jan. 16, 1895.

FLOUR—Goodly shipments were made to China by to-day's outgoing steamer. We quote as follows: Net cash prices for Family Extras, \$3 40; 3 50; bbl; Bakers' Extras, \$3 30; \$3 40; Superfine, \$2 50; \$2 70; bbl.

WHEAT—The volume of business is not large. Sampling on the part of shippers is not general, and the market lacks spirit. No. 1 shipping is quotable at 86½¢ @ 87½¢ cti, with 88½¢ for a choice article. Milling Wheat changes bands at a range of 90¢ @ 96½¢ cti. Walla Walla Wheat continues in fair offering, being quotable at 77½¢ @ 80¢ for fair average quality, 87½¢ @ 90¢ for blue stem and 72½¢ @ 75¢ for damp.

BARLEY—The market is very dull and quiet, the situation being against the selling interest. Prices easy. We quote as follows: Feed, fair to good, 73½¢ @ 80¢; choice, 81½¢; Brewing, 90¢ @ 95¢ cti.

OATS—The inquiry is anything but pronounced, though enough trading is in progress to keep business in fair motion. We quote: Milling, \$1 @ 1 12½; Surprise, \$1 @ 1 15; fancy feed, 97½¢ @ 1 02½; good to choice, 90¢ @ 95¢; poor to fair, 80¢ @ 87½¢; Black, \$1 @ 1 15; Red, \$1 @ 1 17½; Gray, 92½¢ @ 97½¢ cti.

CORN—Shows improving tone. Damp stock sells below quoted figures. Quotable at \$1 @ 1 20 cti, for large Yellow, \$1 @ 1 22½ @ 1 27½ for small Yellow and \$1 @ 1 22½ @ 1 27½ for White.

CRACKED CORN—Quotable at \$27 @ 27 50 per ton.

CORNMEAL—Millers quote feed at \$23 @ \$26 50 per ton; fine kinds for the table in large and small packages, 3¢ @ 3½¢ per lb.

OILCAKE MEAL—Quotable at \$30 per ton from the mill.

COTTONSEED OILCAKE—Quotable at \$26 @ 27 per ton.

SEEDS—Trading is of light order. We quote as follows: Mustard, Brown, \$1 @ 75¢; Yellow, \$2 @ 2 40; Triste, \$2 @ 2 30; Canary, 3¢ @ 4¢; Hemp, 3½¢ @ 4½¢ per lb; Rape, 1½¢ @ 2½¢; Timothy, 5½¢ @ 6½¢ per lb; Alfalfa, 7½¢ @ 7¾¢ per lb; Flax, \$2 @ 2 25 cti.

MIDDLINGS—Quotable at \$17 50 @ 19 per ton.

MILLSTUFFS—We quote: Rye Flour, 3½¢; Rye Meal, 3¢; Graham Flour, 3¢; Oatmeal, 4½¢ @ 5¢; Oat Groats, 5¢; Cracked Wheat, 3½¢; Buckwheat Flour, 5¢; Pearl Barley, 4½¢ @ 4¾¢ per lb.

BRAN—Quotable at \$11 50 @ 13 per ton.

HAY—Prices have weakened a little under liberal receipts. Wire-bound Hay sells at \$1 per ton less than rope-bound Hay. Following are the wholesale city prices for rope-bound Hay: Wheat, \$9 @ \$11 50; Wheat and Oat, \$8 @ \$11; Oat, \$8 @ 10 50; Alfalfa, \$8 @ 9; Barley, \$8 50 @ 10; Clover, \$8 @ 10; compressed, \$9 @ 11; Stock, \$6 @ 7 50.

STRAW—Quotable at 70¢ @ 80¢ per bale.

HOPS—Market inactive, with quotations somewhat nominal at a range of 5¢ @ 8¢ per lb.

RYE—Quotable at 87½¢ @ 92½¢ cti.

BUCKWHEAT—Quotable at 85¢ @ 95¢ cti.

GROUND BARLEY—Quotable at \$18 @ 18 50 per ton.

FEED—Manhattan Horse Food (Red Ball Brand) in 100-lb cabinets, \$8; Manhattan Egg Food, 100-lb bags, \$11 50.

POTATOES—Good demand for the several descriptions. We quote: Volunteer New Potatoes, 1½¢ @ 2¢ per lb; Early Rose, 35¢ @ 45¢; River Reds, 30¢ @ 35¢; Burbanks, 30¢ @ 50¢; Oregon Burbanks, 50¢ @ 55¢; Salinas Burbanks, 75¢ @ \$1; Sweeties, 50¢ @ \$1 cti.

ONIONS—Free supplies. Quotable at 50¢ @ 65¢ cti.

DRIED PEAS—We quote: Green, \$1 @ 25¢ @ 1 50; Niles, \$1 @ 15¢ @ 25¢ cti.

BEANS—Fair demand for good small Whites. We quote as follows: Bayos, \$1 @ 75¢ @ 1 00; Butter, \$1 @ 75¢ @ 1 00 for small and \$1 @ 85¢ @ 1 00 for large; Pink, \$1 @ 10¢ @ 1 35; Red, \$1 @ 60¢ @ 1 65; Lima, \$4 @ 10¢ @ 2 5; Peas, \$2 @ 25¢ @ 50; Small White, \$2 @ 25¢ @ 55; Large White, \$2 @ 10¢ @ 30; Blackeye, \$2 @ 75¢ @ 3; Red Kidney, \$2 @ 75¢ @ 3; Horse, \$1 @ 60¢ @ 1 70 cti.

VEGETABLES—Receipts this morning included 18 boxes Asparagus and 11 boxes Rhubarb. Other kinds were in light offering. We quote as follows: Asparagus, 10¢ @ 15¢ per lb; Rhubarb, 75¢ @ \$1 per box; Mushrooms, 6¢ @ 10¢ per lb for common and 12½¢ @ 20¢ for choice; Los Angeles Tomatoes, 75¢ @ \$1 per box; String Beans, 8¢ @ 10¢ per lb; Green Peas, 5¢ @ 8¢ per lb; Marrowfat Squash, \$5 @ 6 per ton; Hubbard Squash, \$10 per ton; Green Peppers, 4¢ @ 7¢ per lb; Turnips, 50¢ cti; Beets, 60¢ @ 75¢ per sack; Carrots, 30¢ @ 50¢; Cabbage, 30¢ @ 40¢; Garlic, 3¢ @ 4¢ per lb; Cauliflower, 30¢ @ 40¢ per dozen; Dry Peppers, 15¢ @ 17½¢ per lb; Dry Okra, 12½¢ @ 15¢ per lb.

FRESH FRUIT—Apples continue the leading feature, being in large supply. We quote as follows: Persimmons, 25¢ @ 50¢ per box; Apples, 30¢ @ \$1 per box; Pears, 50¢ @ 75¢ per box.

CITRUS FRUIT—Fresh arrivals this week of Bananas and Pineapples from the Islands. Sales of Oranges and Limes are slow. Mandarin Oranges, \$1 @ 50¢ @ 75¢ per box; California Navel, \$1 @ 75¢ @ 2 50; Seedlings, \$1 @ 1 50 per box; Sonora Oranges, \$1 @ 50¢ @ 75¢ per box; Mexican Limes, \$3 @ 50¢ @ \$4 50 per box; California Limes, in small boxes, 50¢ @ 75¢ per box; Lemons, Sicily, \$4 @ 50¢ @ 5; California Lemons, \$1 @ 50¢ @ 2 for common and \$2 @ 50¢ @ 3 for good to choice; Bananas, \$1 @ 2 per bunch; Pineapples, \$4 @ 6 per dozen.

DRIED FRUIT—Values are somewhat nominal, there being no representative business in progress.

Following are the prices furnished by the Fruit Exchange:

Apricots—Fancy Moorpark, 8½¢; choice, do, 8¢; fancy, 7½¢; choice, 7¢; standard, 6½¢; prime, 6¢. Apples—Evaporated, 5½¢ @ 7¢; sun-dried, 4¢ @ 5¢. Peaches—Fancy, 6½¢; choice, 6¢; standard, 5½¢; prime, 5¢; peeled, in boxes, 12¢ @ 13¢. Pears—Fancy, halves, 5½¢; quarters, 4½¢; choice, 4½¢; standard, 3½¢; prime, 3¢. Plums—Pitted, 4¢ @ 5¢; unpitted, 1½¢ @ 2¢. Prunes—Four sizes, 4½¢ @ 4¾¢. Nectarines—Fancy, 7¢; choice, 6½¢; standard, 6¢; prime, 5½¢. Figs—White, choice, 5¢ @ 5½¢; Black, choice, 1½¢ @ 2¢. Raisins—4-crown, loose, 40¢ per lb. in 5-lb. boxes; 3-crown, 2½¢; 2-crown, 20¢; seedless Sultanias, 3¢; seedless Muscatels, 20¢ per lb. 3-crown London Layers, \$1 @ 25¢ per box in 20-lb. boxes; clusters, \$1 @ 50; Dehesa clusters, \$2; Imperial clusters, \$3; 4-crown, loose, \$1 @ 15¢; 4-crown, loose, faced, \$1 @ 25¢ per box. Dried Grapes—1½¢ per lb.

NUTS—Consignments of Italian Chestnuts just received. A cargo of Cocoanuts is also at hand from Tahiti. Market generally quiet. We quote: Chestnuts, 9¢ @ 11¢; Walnuts, 5¢ @ 7¢ for hard shell, 8¢ @ 9¢ for soft shell and 8¢ @ 9¢ for paper shell; California Almonds, 7¢ @ 7½¢ for soft shell, 4½¢ @ 5¢ for hard shell and 6¢ @ 8¢ for paper shell; Peanuts, 4½¢ @ 6¢; Hickory Nuts, 5¢ @ 6¢; Filberts,

8½¢ @ 9¢; Pecans, 6¢ for rough and 8¢ for polished; Brazil Nuts, 7¢ @ 7½¢ per lb; Cocoanuts, \$4 @ 5 per 100.

HONEY—We quote: Comb, 10¢ @ 11½¢; water white extracted, 7¢ @ 7½¢; light amber extracted, 5½¢ @ 6¢; dark amber, 5¢ @ 5½¢ per lb.

BESWAX—Quotable at 24¢ @ 26¢ per lb.

BUTTER—Easy at ruling prices. Fancy creamery, 22¢ @ 24¢; fancy dairy, 17¢ @ 18¢; good to choice, 15¢ @ 16¢; fair, 13¢ @ 14¢; store lots, 12¢ @ 13¢; pickled roll, 15¢ @ 16¢; firkin, 15¢ @ 16¢ per lb.

CHEESE—Weak at a decline. We quote: Choice to fancy, 8¢ @ 10¢; fair to good, 6¢ @ 7¢; Eastern, ordinary to fine, 11¢ @ 14¢ per lb.

EGGS—Are cheaper, with still downward tendency. Occasionally, a fancy parcel sells at a trifle above quoted rates. We quote as follows: California Ranch, 30¢ @ 32¢; store lots, 23¢ @ 27¢; Eastern Eggs, 23¢ @ 25¢ per dozen for cold storage and 26¢ for fresh.

POULTRY—The situation is against sellers, offerings being liberal. We quote as follows: Live Turkeys—Gobblers, 9¢ @ 10¢; Hens, 9¢ @ 10¢ per lb; dressed Turkeys, 10¢ @ 12½¢ per lb; Roosters, \$4 @ 4 50 for old, and \$4 @ 5 50 for young; Broilers, \$3 @ 4 for small and \$4 @ 5 for large; Fryers, \$4 @ 5 @ 5; Hens, \$4 @ 5 50; Ducks, \$5 @ 5 50; Geese, \$1 @ 50¢ @ 2 per pair; Pigeons, \$1 @ 1 50 for old and \$1 @ 75¢ @ 2 25 per dozen for young.

PROVISIONS—Trade fair. No improvement in values. We quote as follows: Eastern Sugar-cured Hams, 11¢ per lb; California Hams, 10¢ @ 10½¢; Bacon, Eastern, extra light, sugar-cured, 13¢; medium, 8½¢ @ 9¢; do, light, 9¢ @ 10¢; extra light, 11¢ @ 12½¢ per lb; Pork, extra clear, bbls, \$19; half bbls, \$10; Pig Pork, bbls, \$21; hf bbls, \$11; Pigs' feet, hf bbls, \$4 50; dry salted Pork, 8½¢ @ 9¢ per lb; Beef, mess, bbls, \$7 50; do, extra mess, bbls, \$8 50; do, family, \$10; extra, do, \$10 50 @ 11¢ per lb; do, smoked, 9¢ @ 10¢; Pickled Tongues, hf bbls, \$7; Eastern Lard, compound, tierces, 8½¢ @ 9¢; do, prime, steam, 8½¢; Eastern pure, 10-lb pails, 9½¢; 5-lb pails, 9½¢; 3-lb pails, 9½¢; California, 10-lb tins, 7½¢ @ 8¢; do, 5-lb, 8¢ @ 8½¢; California pure, in tierces, 7½¢ @ 8¢; do, compound, 6¢ @ 6½¢ for tierces.

WOOL—No trade of consequence. Several scourers are running on contracts made some time ago. Netter values nor business is expected to improve until spring clip comes forward freely. We quote Fall:

Free Northern..... 7 @ 8½¢
Northern, defective..... 5 @ 7
Southern & San Joaquin, light and free, 5 @ 6
Do, defective..... 3 @ 4

HIDES AND SKINS—Nothing of special interest in the situation. Quotable as follows:

	Sound.	Culls.
Heavy Steers, 54 lbs up, ¾ lb...	8½¢ @ 7	5½¢ @ 6
Medium Steers, 48 to 56 lbs...	5½¢ @ 6	5 @ 7
Light, 42 to 47 pounds...	4 @	3½¢ @
Cows, over 50 lbs...	5 @	4 @
Light Cows, 30 to 50 lbs...	4 @	3½¢ @
Stags...	3 @	2 @
Kips, 17 to 30 lbs...	4½¢ @	3 @ 3½¢
Veal Skins, 10 to 17 lbs...	5½¢ @	4 @ 4½¢
Calf skins, 5 to 10 lbs...	7 @	6 @
Dry Hides, usual selection, 90;		
7¢ @ 7½¢; Calf Skins do, 12¢ @ 13¢; Cull Hides, Kip and		
Calf, 6¢ @ 8¢; Pelts, Shearings, 10¢ @ 20¢ each; do,		
short, 25¢ @ 30¢ each; do, medium, 30¢ @ 40¢ each; do,		
long wool, 40¢ @ 70¢ each; Deer Skins, summer,		
25¢ @ 30¢; do, good medium, 15¢ @ 22½¢; do, winter, 5¢		
per lb; Goat Skins, 20¢ @ 35¢ apiece for prime to per-		
fect, 10¢ @ 20¢ for damaged, and 5¢ each for Kids.		

TALLOW—We quote: Refined, 5½¢ @ 6¢; rendered, 4½¢ @ 4¾¢; country Tallow, 4¢ @ 4½¢; Grease, 3¢ @ 3½¢ per lb.

MEAT MARKET.

Business runs along smoothly without any marked variation in prices. Following are the rates for whole carcasses from slaughterers to dealers:

BEEF—First quality, 5¢ @ 5½¢; second quality, 4½¢; third quality, 3½¢ @ 4¢ per lb.

CALVES—Quotable at 4½¢ @ 5½¢ for large and 5½¢ @ 7¢ per lb. for small.

MUTTON—Quotable at 5¢ @ 6¢ per lb.

LAMB—Yearlings, 6¢ @ 7¢ per lb.

PORK—Live Hogs, on foot, grain fed, heavy and medium, 3½¢; small Hogs, 4¢; dressed Hogs, 5½¢ @ 6½¢ per lb.

Caution.

Special attention is called to the advertisement, on another page, of Catton, Bell & Co., who are the sole Pacific coast agents for "Little's Chemical Fluid Sheep Dip." The reputation and sale of Little's Dip have reached such proportions that it is found necessary to caution those who want the genuine dip, from purchasing inferior imitations.

They are again compelled to warn sheepmen and the trade in general from purchasing cheap and worthless dips that are now sold in this market under the name of "Little's Australian Dip," and which is put up in square coal-oil cans and sold at prices ranging from 80 cents to 95 cents per gallon, as also against buying any dips that may be sold under the name of Little's that are not put up in the regulation iron drum.

The genuine "Little's Chemical Fluid Sheep Dip" is put up in round, iron drums, painted red, and each drum bears an orange-colored label giving the trade mark of Little's Dip, and showing the signatures of the manufacturers, and also of Catton, Bell & Co. as sole agents. The dip is also put up in tins containing a large English gallon, packed ten cans to the case. The dip is sold by them to the trade by the English gallon only.

The imitation is also put up in small American gallon tins, without labels.

See that each drum and gallon can is labeled with "Little's Dip," without which none is genuine.

BACK FILES of the PACIFIC RURAL PRESS (unbound) can be had for \$2.50 per volume of six months. Per year (two volumes), \$4. Inserted in Dewey's patent binder, 50 cents additional per volume.

TO LEASE!

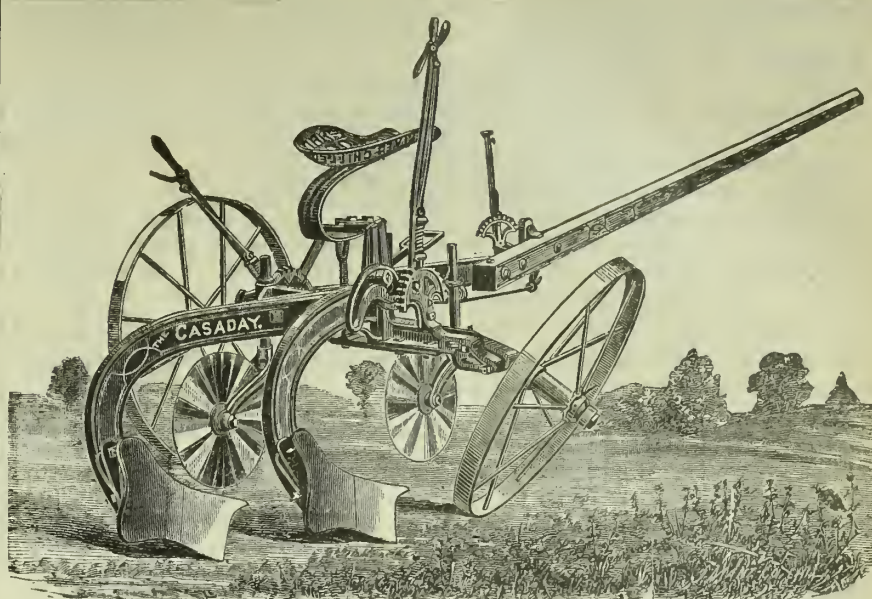
For one or two years, or for sale.

Fruit Ranch of 50 Acres,

In Lagoon Valley, near Vacaville, Solano County, Cal. French Prunes, Bartlett Pears and Cherries in full bearing. House with modern improvements.

C. H. STEINMETZ,

Vacaville, California
Or 126 Kearny Street, San Francisco.



The above cut shows the CASADAY TWO-GANG, whose many years of successful work in the field have earned for it the title of

King of Gang Plows.

MADE 10 AND 12-INCH. CHILLED OR STEEL BOTTOMS.

The "Casaday's" praises are heard from end to end of our great State and every year shows a rapid growth in its popularity. These plows are strong, durable, light in draft and easy to handle, giving perfect satisfaction. If you are in need of a gang do not fail to investigate the "Casaday" before purchasing.

SEND FOR CATALOGUE TO

Oliver Chilled Plow Works,

37 MARKET STREET, SAN FRANCISCO.



IT TAKES THE CAKE.

A short time since there was a State meeting of the creamerymen of Nebraska held at Lincoln. They brought samples of their butter along to be judged. Do you know what machine made the best butter? It was the

SHARPLES RUSSIAN SEPARATOR.

It not only makes the best butter but it does the work the cheapest of any separator in the world. It uses but a spoonful of oil a day. It skims clean, and is very easy to handle.

THE BOWL ALONE REVOLVES.

Did you ever hear of a separator so filled with patty pans that it takes two hours to wash it? Well, that kind is not called the Russian. Did you ever hear of a separator bowl jumping out of its frame and chasing the operator out of the creamery? There was never a Russian did it. The Russian is in for business all the time. The bowl does not tremble. Trembling bowls are dangerous. The Russian does nothing but attend to business.

Send for circulars and please mention this paper.

Baker & Hamilton,

Sole Pacific Coast Agents,

SAN FRANCISCO, SACRAMENTO, LOS ANGELES, NEW YORK.

Patrons of Husbandry.

Grange Revival Again.

A meeting of the Executive Committee of the State Grange was held on Saturday last at Sacramento, there being present besides the members of the committee a half score of prominent patrons, including Past Masters Flint, Johnston and Overhiser. The main theme was that of Grange revival and the outcome was a determination to put the inspection system into force. With that purpose, all that part of the State north of Tehachapi was divided into four inspection divisions and an officer appointed to take charge of each. To the whole region north of Sacramento Mr. E. C. Shoemaker was assigned; to the Sacramento district, Lecturer Good-enough; to the San Jose district, Mr. Bucher; to the Stockton district, Overseer Greer. Our information does not give the exact lines of these several divisions. The several district inspectors are very shortly to meet with the worthy master for study of the work, in order that it may be uniform throughout the jurisdiction.

In addition to this plan, Messrs. Roache, Jones and Walton were appointed a committee to arrange for the publication of grange news. They were in San Francisco on Monday and have set on foot negotiations which will probably result in the engagement of a writer to regularly supply the RURAL PRESS with reports and discussions of Grange affairs. This is what the publisher of the RURAL has all along asked for. He is willing to give space to grange news without charge but he demands that the Executive Committee shall do the work of collecting and accept the responsibility of editing the matter.

In view of these doings there is a look of better promise in the grange field than for a long while past. It will take some little time to set the new movement on its feet but by the first of March, if not sooner, we ought to see new life and new interest all along the line.

Red Letter Day for Sacramento Grange.

TO THE EDITOR:—Sacramento Grange decided to install their officers on Jan. 12th, beginning at 12 m. sharp. Outsiders were not expected, but as the Executive Committee of the State Grange were holding session here, I saw a grand opportunity to have our grange honored by the presence of so many of the State officers.

I invited State Master Roache to take my place as installing master. It took considerable persuasion on my part to overcome his extreme modesty and obtain his consent. As our grange has been sometimes called a kid-glove grange, he preferred to sit in the rear and look on and take notes.

Bro. I. C. Steele tells a story about when he was a lad; how he rubbed the ears of a whelp of a pulp he had to get up courage for a fight. I adopted this expedient on the Worthy Master and succeeded in getting up a good glow on his ears, and it had a wonderful effect. Bro. Roache, with the able assistance of Bro. Overhiser, installed our officers in a graceful and efficient manner, every chair being filled.

Our new master, although several years younger than the grange, started off with great promise for future use-

fulness in the grange. Although in the presence of so many past masters and State officials, which frequently embarrasses older and more experienced members, he acquitted himself with rare ability.

When the officers were elected and they selected me as the installing master, I made a particular request that each officer should give the grange a short talk. Although in the presence of so many visitors and State officers, all responded in good style, and especially the master and chaplain—mother and son. Those must have been happy moments to that mother, from the suppressed smiles that I could see glowing on her face when she witnessed her eldest son being installed as master of Sacramento Grange, and later on listened to the noble grange sentiments that he expressed in his remarks to the grange. There were many persons present who would have given a small fortune if they could have done half as well as that at his age.

It is a rarity to hear such sentiments as were expressed by our chaplain after being introduced. They were not superficial stereotyped expressions, but came from a heart full and overflowing with goodness. These good words had such an effect on me that I wanted to be nearer kin than sister—I wanted to say mother.

Our retiring gate keeper made the supreme effort of his life as he welcomed his successor with that bird which can see better in the night than it can in the day perched on a pole as the emblem of his office. The stream of hot eloquence was about equally divided between the trembling standard-bearer and the bird, which had large eyes but could see not, large ears but could hear not.

It is a rare thing to get together in a subordinate grange so many officers of the State Grange at one time. There were three past masters, present worthy master, overseer, steward, secretary, and two of the executive committee, and perhaps some that I cannot think of just now. We had visitors from several granges, including the lady master from Roseville, who was present to obtain points. It is quite a time since I have seen so much enthusiasm in the grange. It seemed like some of the bygone grange days. The hall was well filled but the time was too short to get a speech from every one. I hope some of these intended speeches will be bottled up and corked tight, so we can call on them at some future time. I hope some of our sister granges will be as fortunate as we have been in getting a visit from the State officers. I think Sacramento Grange has a bright future with her promising set of officers.

Now, members, if you cannot do anything else, help us with your presence. I cannot enthuse to empty walls.

DANIEL FLINT.

Election in South Sutter.

We are indebted to the lecturer of South Sutter Grange for the following report of the annual election which occurred on the 12th inst.:

M., Henry J. Grunewald; O., May Donaldson; L., Frances F. Purinton; S., Henry M. Hawn; Ass't S., Chas. Jackson; Chap., Ann M. Roberts; Treas., John W. Jones; Sec'y, Willy F. Sankey; G. K., Annie M. Howsley; Pomona, Lottie Annereau; Flora, L. Belle Sankey; Ceres, Ella Decker; L. A. S., Edna P. Jackson; Organist, Idell Sankey; Trustee, Wm. W. Decker. Date of installation, Jan. 26, 1895, 10 o'clock A. M.

From Potter Valley.

New officers for the year: Master, Wm. Eddie; O., Mrs. Fannie Thomas; L., Miss Rosa Sides; S., Jerry Lierly; Ass't S., R. R. Burrows; Chap., Mrs. Kate McGee; Treas., H. P. McGee; Sec'y, W. V. Kilbourne; G. K., Miss Jennie Desalm; Pomona, Miss Blythe Lierly; Flora, Miss Alta Spencer; Ceres, Mrs. Laura Lierly; L. A. S., Miss May Eddie; Trustee, W. V. Kilbourne.

Tulare Grange.

The regular meeting of Tulare Grange was held in its hall on Saturday, the 5th of this month.

The newly elected officers were duly installed by Past Master Premo, Bro. E. C. Shoemaker once more assuming the master's gavel.

Two candidates for the degrees were balloted for and elected.

Sister Ingham of committee appointed at last meeting to draw up a bill providing for the destruction of noxious weeds along highways and irrigation ditches submitted a bill, but the lecturer reporting that he had consulted the then district attorney, Mr. Power, he (Mr. Power) had given it as his opinion that under Sec. 28 of the County Government law, defining powers and duties of supervisors, and under decisions of the Supreme Court of California, the supervisors by proper ordinance now have the power to provide for the extermination of noxious weeds, a resolution was passed directing the secretary to draw up and forward to the supervisors a communication requesting them to pass an ordinance for the suppression of noxious weeds.

The grange prepared an address to the members of the Legislature from Tulare county, requesting such legislative action as will reduce salaries of county officers to such amounts as can be obtained for similar services in legitimate business enterprises. A copy of this address was sent to each member of the Legislature from Tulare.

A committee was appointed to report amendments to the Wright Irrigation law. There is a strong feeling the law as it now stands provides for too many salaried officers, and if taxes were paid in to the county treasurers,

AYER'S THE ONLY Sarsaparilla ADMITTED

READ RULE XV.



"Articles that are in any way dangerous or offensive, also patent medicines, nostrums, and empirical preparations, whose ingredients are concealed, will not be admitted to the Exposition."

Why was Ayer's Sarsaparilla admitted? Because it is not a patent medicine, not a nostrum, nor a secret preparation, not dangerous, not an experiment, and because it is all that a family medicine should be.

At the WORLD'S FAIR Chicago, 1893.

Why not get the Best?



50c Trial Sets Of Choice Seeds, Plants and Fruits.

By mail postpaid, safe arrival and satisfaction guaranteed. Order by the letters and the numbers from this advertisement NOW, as these are introductory sets, not in catalogue, an Elegant Annual of 168 pages, which will be sent free with first order. If none of these sets suit you and you want anything in our line send for CATALOGUE FREE. About 60 pages devoted to VEGETABLE and FLOWER SEEDS, 70 to PLANTS and the balance to the CREAM OF THE FRUITS.

FRUIT TREES, Etc.—Mail Size.
Set 103—8 Peach, 4 sorts 50c
" 104—8 Apple, 4 sorts 50c
" 105—2 Pear, 2 Cherry 50c
" 106—8 Grapes, 3 sorts 50c
" 107—8 Grapes, all Concord 50c
" 108—4 Gooseberries, 4 sorts 50c
" 109—10 Currants, 3 sorts 50c
" 110—30 Raspberries, 5 sorts 50c
" 111—20 Strawberries, 5 sorts 50c
" 112—1 each Japan Chestnut & Walnut, 50c
" 113—20 Blackberries, 4 sorts 50c
One-half each of any two sets 50c, any 3 sets \$1.25, 5 sets \$2.00.

EVERYTHING OF THE BEST FOR ORCHARD, VINEYARD, LAWN, GARDEN, GREENHOUSE AND CONSERVATORY. MILLIONS OF TREES, SHRUBS, VINES, ROSES, ETC.

41st YEAR. 1,000 ACRES. 29 GREENHOUSES.
THE STORRS & HARRISON CO., Box 160 Painesville, O.

to be paid out on a similar plan to that of paying out school moneys, the bonds of the district would rate higher in the market.

Bro. Julius Forrer read his meteorological observations kept at the U. S. Experimental Station for December.

The lecturer announced that Congressman W. W. Bowers had sent him and he had for distribution among the members of Tulare Grange, Reports of the Secretary of Agriculture for the years 1892 and 1893, and also packages of vegetable seeds of assorted varieties.

Those reports of the Secretary of Agriculture are made up of reports of the Chiefs of the different departments, each departmental report embodying the latest developments in that department. No intelligent farmer can afford to be without them. Each volume is worth more to him than his year's dues in the grange.

BRONCHITIS. Sudden changes of the weather cause Bronchial Troubles. "Brown's Bronchial Troches" will give effective relief.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING JANUARY 1, 1895.

531,990.—BICYCLE CANOPY—M. W. Armstrong, Los Angeles, Cal.
531,995.—BALING PRESS—H. Bailey, Williamina, Or.
531,779.—CARBURETOR—E. R. Cook, Sacramento, Cal.
531,780.—CARBURETOR—E. R. Cook, Sacramento, Cal.
531,791.—METALLIC BUNG—M. Fischer, S. F.
531,918.—BICYCLE—J. Forrest, Medical Lake, Or.
531,930.—CAR—C. S. Hardy, San Diego, Cal.
531,906.—ERASER—C. R. Pechin, S. F.
531,857.—FLOUR SCOOP—M. E. Peterson, Igo, Cal.
531,807.—GAS ENGINE STARTER—J. W. Raymond, S. F.
532,013.—FURNACE—A. Ropp, S. F.
531,650.—TELEPHONE INDICATOR—Sabio & Hampton, S. F.
531,812.—LABEL MANIPULATOR—J. Stites, Salem, Or.
531,815.—CLOTHES DRIER—Geo. Wade, San Diego, Cal.
531,818.—VOTING MACHINE—H. Weber, Temescal, Cal.
531,872.—VEHICLE BRAKE—G. W. Wise, Warner Lake, Or.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Cheap Fruit Trees!

APPLE SEEDLINGS, home grown, transplanting sizes, Nos. 2 and 3.
Also large stock of FRENCH PRUNES. Write for prices.

ROBERT P. EACHUS,
Oak Mound Nursery. Lakeport, Lake Co., Cal.

Olive Trees for Sale

GEO. H. KUNZ, Sacramento.

Mission, 3 years.....	5 to 6 feet.
Mission, 2 years.....	3 to 4 feet.
Manzanillo, 2 years.....	2 to 3 feet.
Nevadillo, 2 and 3 years.....	4 to 6 feet.
Picholine, 2 years.....	2 to 3 feet.

KANSAS SEED HOUSE.

EVERYTHING IN THE SEED LINE.

Our Specialties: Seed Corn, Tree Seeds, Onion Seeds and Sets, Alfalfa, Salsoline, Lathyrus, Silvestris, Sandvichensis, Spurry, Kaffir, and Jerusalem Corn, and other new forage plants for dry and arid countries. NEW CATALOGUE MAILED FREE ON APPLICATION.
F. BARTEDES & CO., Lawrence, Kansas.

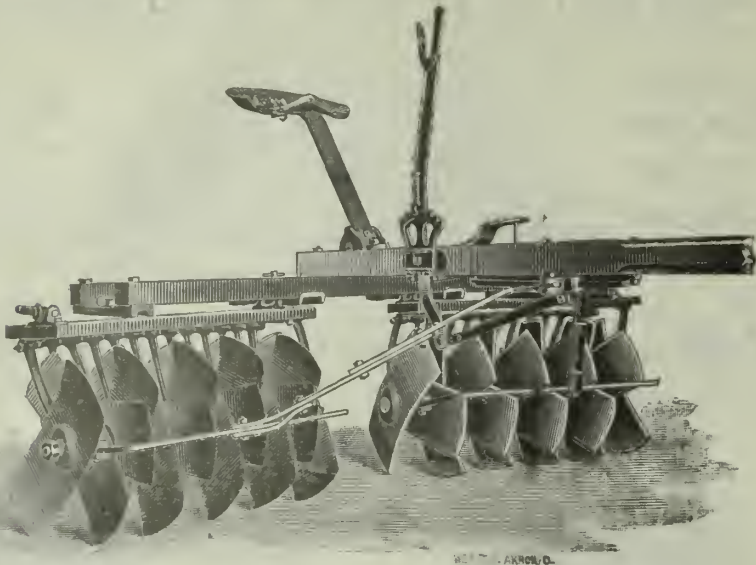
WANTED!

Position as Manager on a Large Farm. Thorough acquaintance with Stock Raising, Dairy Business, General Farming. Experience in foreign countries; French, English, German correspondence; Bookkeeping. Graduate of Agricultural Academy in Germany. P. O. box 1835, Bakersfield, Kern County, Cal.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in all parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thomas A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent, postpaid, at the reduced price of 75 cents per copy, in cloth binding. Address THE PACIFIC RURAL PRESS, 220 Market Street, San Francisco, Cal.



PACIFIC SPADER, REVERSIBLE.

DOES TEN TIMES THE WORK OF A DISC HARROW. AS A CULTIVATOR FOR VINEYARDS AND ORCHARDS IT CANNOT BE EXCELLED.

The Best Implement of its class ever produced. All of our *Reversible Spaders* have adjustable heads so arranged that the wings may be extended and thus run under vines and trees.

JUST WHAT ORCHARDISTS AND VINEYARDISTS HAVE LONG NEEDED.

HOOKE & CO.—Dear Sirs:—I want to add my testimony to those who have tried your PACIFIC SPADER AND CULTIVATOR. It is by far the best cultivator, pulverizer and weed destroyer I have ever seen, and I can hardly see how it can be improved. Breaking all lumps over 2½ inches thick, and working up the ground to the depth of 6 to 8 inches, it is just what orchardists and vineyardists have long needed. I find no objection in your Spader because it takes power to work it. These one and two-horse cultivators are "not in it" alongside of the PACIFIC SPADER. All orchardists who wish to work up their ground thoroughly and properly should be in possession of one.

SAN JOSE, April 27th, 1893.

O. M. BOYLE.



CANTON ORCHARD CULTIVATOR.

Combined Hand, Foot and Power Lift.

THE REAR FRAME, to which the legs or shanks are attached, is made from two pieces extra thick square gas pipe. This produces the very strongest form of frame. They are clamped together with thick wrought steel clamps and heavy bolts. Two wrought steel strips also clamp these gas pipes and project forward and encircle the axle, and are attached to the axle so as to raise and lower, which gives a low or high hitch to the gangs, and also gives more or less pitch to the shovels.

THE SHANKS OR LEGS, to which the shovels are attached, are made from steel with their front edge made sharp. These Shanks or Legs have a series of holes so they can be raised or lowered to meet any requirements.

RAISING LEVER.—We have a combined hand and foot Lever, and have also put on a strong spring to assist the operator in raising the gangs. This improved construction makes this the easiest Cultivator to operate now on the market.

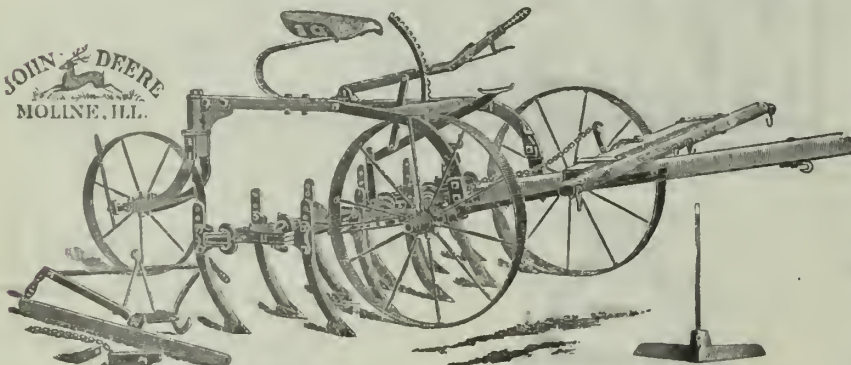
SIZES.—No. 5, five feet, 11 shovels; No. 6, six feet, 13 shovels; No. 7, seven feet, 15 shovels. Write for prices.

VEHICLES AND FARMING IMPLEMENTS OF EVERY DESCRIPTION.

We are Agents for the UNION BICYCLE. The best Bicycle manufactured in the United States. CRACKAJACKS RIDE UNIONS. Write immediately and secure the agency.

HOOKE & CO., 16 & 18 DRUMM ST., SAN FRANCISCO, CAL.

The Best Cultivators Ever Made.



THE "SUNSET" CULTIVATOR.

"Sunset" and "Top Notch" Cultivators

WITH "HATCH," "DUCKFOOT," "CHISEL,"

AND ALL OTHER STYLES OF SHOVELS FOR ORCHARD AND VINEYARD CULTIVATION.

"Weed-cutting alone will not do in California. The surface will be ashey, but just below there is a hard layer which evaporates all that is brought up to it by capillary action almost as rapidly as it would go from the immediate surface. A slender-toothed cultivator, a narrow chisel-tooth, or a duck foot with a long, slim standard, which stirs, but does not 'stir up,' is needed, as well as a weed cutter. Some of the newer cultivators have the two combined."

"Atmospheric moisture is best absorbed by a loose, finely pulverized soil surface. In this country, evaporation outdoes absorption over and over again during the season of the driest air. No one would think of 'stirring up' soil to get anything out of the air, unless it might be in the fog belt. Better keep what moisture you have in the soil so the plant can have the full benefit of it."

The above sensible expressions have the endorsement of the sensible fruit raisers of this State. Turning damp soil up to the sun's rays will not keep it damp, but the air will make the moisture.

To Avoid Evaporation!

Use shovels that loosen the subsoil without disturbing the top soil.

WRITE FOR CIRCULARS TO

DEERE IMPLEMENT COMPANY,

305 AND 307 MARKET ST. SAN FRANCISCO, CAL.



THE "TOP NOTCH" CULTIVATOR.

THE PACIFIC RURAL PRESS

AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 4.

SAN FRANCISCO, SATURDAY, JANUARY 26, 1895.

TWENTY-FIFTH YEAR.
Office, 220 Market Street.

The Heavy Winter.

The winter of 1895 bids fair to go upon record as one of the heaviest in point of snow and rain and prevailing low temperature during American occupancy of California. The rainfall has been very great, exceeding already the average for the whole season in many localities, and we have three rainy months still to come—not counting the occasional showers of May. Probably we shall have much rain still to get into the ocean, for all the land can hold and more has already fallen. The mountains also support a weight of snow proportional to the rainfall of the valleys. Fortunately so far, though there are vast overflowed areas, there has been no general flood working great injury to interior towns. In the open country, though great harm has been done in some localities, the evil of a general flood has thus far been averted. The tule island levees have thus far stood firm and nothing like disaster has yet been experienced.

Great losses in the aggregate have occurred from idleness of farm hands and teams. Since the middle of December the fields of the northern and central regions of the great valley have been inaccessible to teams or have at least been too wet for satisfactory work. Thousands of acres which were plowed have never come into condition for sowing, and other lands carry now a crop of weeds which almost defies the working of the plow. No doubt the standing water has already destroyed much seed on early-sown land, and next spring will show considerable losses of fruit trees on low, undrained land which has been too often chosen for orchards. These are all points of damage in the heavy rainfall; to offset them will come of course the vast harvest from lands which are usually too dry to yield anything, and there will be an amount of feed beyond all recent experience, for every foot of the surface which is not impenetrable rock will be covered with rank vegetation this year.

On the whole, the year should be a notably good one. Wet years usually are in spite of their discomforts and incidental losses. We shall have hay and grain and pasturage enough to supply half the continent and fruit and flowers of unusual size and beauty. Such abundance should go far to smother the lingering wail of depression and wake up the State to content and confidence.

People who have not already decided on the measure of the chilly weather by the size of their coal bills may be interested to know that there is scientific data for a conclusion. The Weather Bureau has issued a special circular showing that in December we had a mean temperature of 50° in San Francisco, when the average mean temperature for twenty-four years is 52°, and 50° is as low a mean temperature or as mean a low temperature as we ever had in December for over twenty

years, although we have dropped to 50° on several other years. This thing of low temperature has been a weakness of 1894 all through. The Weather Bureau shows that the accumulated deficiency of daily temperature during December was 79°. There was an average daily deficiency of 2.5°, and an accumulated deficiency of daily mean temperature since January 1, 1894, of 591°, and an average daily deficiency of 1.6°. This would seem to be enough to account for all the crookedness of 1894. To lose nearly 600° of heat during the year by a steady drain of 1.6° a day is enough to make any one feel poor and mean.



SCENE ON THE RAILWAY IN THE CALIFORNIA MOUNTAINS.



A MOUNTAIN GORGE IN ITS SNOW MANTLE.

On the California Mountains.

Our engravings to-day present one of California's resources which is not usually counted among the possessions of the State, and that is the exceptionally fine snow mantle of our mountains. It is an exceedingly picturesque feature of the State, but one which is as little appreciated as it is talked about. It is only when it asserts itself, as it is now doing, in the stoppage of overland traffic, that the public generally notes its presence. It has not yet caused us the inconvenience of earlier years, when days multiplied into weeks before the trains could break through the mountain blockade, but that is no fault of the snow. It is all up there ready for the blockade business, but the machinery for its conquering is much superior to that of former days.

The engravings are characteristic mountain scenes in January. One shows a site on the overland line where the snow has well nigh buried the small village, while the railway runs between banks twenty or thirty feet high made by the powerful rotary plow in keeping the rails uncovered. The man standing in pensive mood on the railway track is not waiting for the train. He is merely thinking what a fool a photographer must be to prowl around in such weather.

The other scene shows the unbroken solitude of the snow-clad mountain region away from settlements and railway lines. The gorge is well nigh choked with snow, and the tall pines, which in the distance seem like the trees of the toy shops, are in many cases half buried. It is a scene comfortable to contemplate when one has his feet on a warm fender.

The snow regions of California are but the settings of her green and flower-clad valleys, though they are of course of large value in themselves. The timber, the metals, the river waters and the peerless farm produce of the fertile areas are all a conspicuous contribution to the wealth and greatness of the State. The mountain region is also a charm and delight as a refuge from valley heat and dust in the summer time. Though the country conditions are in such contrast to California's traditional fame for winter warmth and sunshine, the mountain region is still a heritage which the State could ill afford to lose.

THE use of the telephone on Australian sheep ranches is becoming common. Its employment is mentioned on the Clark ranch in Montana, where all the sheep and shepherds are watched and handled telephonically by means of six stations, all communicating with a central point from which come weather signals, orders, etc.

THE season so far has been quite open in England and other European countries.

PACIFIC RURAL PRESS.

Office: No. 240 Market St.; Elevator, No. 12 Front St., San Francisco, Cal.

Any subscribers paying \$3 in advance will receive 13 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months.

Advertising rates made known on application.

Any subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

Our latest forms go to press Wednesday evening.

Chicago Office: CHAS. D. SPALDING, 320, 189 La Salle St.

Registered at S. F. Postoffice as second-class mail matter.

ALFRED HOLMAN, Editor.
E. J. WICKSON, Special Contributor.

San Francisco, January 26, 1895.

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The Week.

Pomological Society. The meeting of the American Pomological Society in Sacramento last week was sadly depressed and limited by the thoroughly unsympathetic weather which has ruled so long. There were about fifty attendants from beyond the mountains, and at some of the sessions there were hardly fifty Californians to participate with them in the work of the society. The eastern people were, however, ladies and gentlemen of notable horticultural eminence, and the earnest effort put forth by the Sacramento people to welcome and entertain them was fully appreciated. Sacramento did herself and the State credit by her acts of hospitality, and it was sadly unfortunate that the weather prevented a fuller attendance of welcoming Californians. The display of products in the meeting hall was very fine and the demonstration of the quality of California dried fruit, cooked and served in the hall, was a success in every way and a taking feature of the meeting. The papers and addresses were of high order, as the columns of this and future issues of the RURAL will show. The Eastern pomologists and their friends are visiting central California this week, and next week will receive the welcome of southern California. They seem to be having a good time, and if they can enjoy California in her present mood, how they would rejoice when California is herself again. It is unfortunate to plan such events in midwinter even in California.

Humming Again. The arrival of Prof. C. V. Riley in California to attend the meeting of the American Pomological Society in Sacramento, has stirred up B. M. Lelong, secretary of our State Board of Horticulture, and now the bees in both their bonnets are humming as angrily as during the sharp controversy of 1893. During the presence of Messrs. Riley and Lelong in Sacramento last week they did not walk under the same umbrella, nor indeed was the same hotel large enough for both of them. Apparently neither party desired a renewal of the conflict, and Prof. Riley expressly stated that he came to California on a peace errand; that he was out of Governmental entomology and that all he asked was a chance to enjoy the glorious climate, which he proceeded to do, with his trousers' legs and collar turned up—as did all others who attended the Sacramento meeting. We imagine the weather had much to do with the renewal of hostilities between the parties, for when Prof. Riley reached San Francisco, the reporters, who are put to their pencils' ends for news this weather, pounced

upon him and pushed him into utterances not altogether creditable to Mr. Lelong. These utterances, as we understand them, refer merely to Mr. Lelong's literary and entomological talents, but when the reporters carried them over to Mr. Lelong for comment they seemed to signify an impeachment for high crimes and misdemeanors, and Mr. Lelong proposes, so the reporters say, to see whether there is any law in this country to protect a man's good name. Thus we have the old issue, which we hoped had died of heart failure long ago, reassert itself. The Vedalia, whose seizure from Australia has turned her into a sort of entomological Helen, and over whose economic charms the Trojans of California and the Greeks of Washington have so long fought, comes forth again to disturb the public peace. There is nothing in the newspaper contention of the parties named, except what RURAL readers knew and grew weary of long ago, but it serves very well for the great dailies to make sensation of during this sort of weather.

Berkshire Breeders. Since our note last week of the desirability of an awakening on advanced swine culture in this State, we have received the following invitation:

Mr. and Mrs. F. O. Lush,
Request the pleasure of your company
at the Banquet
Given to the breeders attending the annual meeting
of the
National Berkshire Record Association,
on Wednesday evening,
Feb. 13, 1895;
at their home in Indianapolis,
Indiana.

The above shows how Eastern swine breeders associate and how they have pleasure as well as business in it. We are glad to see that the National Berkshire Record Association have three stockholders in California, viz: Thomas Waite and P. H. Murphy of Perkins, Sacramento county, and H. P. Mohr of Mt. Eden, Alameda county. Mr. Mohr is down on the programme of the annual meeting for an essay on his method of breeding and handling Berkshire pigs from birth to weaning time. We hope it will not be long before we have such meetings of swine men in this State.

The Exchange Convention. The Convention of Fruit Exchanges which was in session in this city last week was a business-like body, duly accredited by organized co-operative societies, and whose members, acting under the responsibilities of representation, and unembarrassed by the presence of the reporter, frankly and freely discussed all aspects of the questions before them. Finally reaching deliberate conclusions, which were unanimously agreed to, and which will doubtless be ratified by the constituencies which accredited them. The results are stated on other pages of this number, in an official statement by Manager Adams, and in a statement of the plan of organization which accompanies the list of delegates. It is sufficient to say here that the outcome of the convention is a complete, and we presume final, indorsement of the plans of the original founders of the State Exchange, which were, in substance, that the State Exchange, for a time, should lead in organization, and thereafter become the servant of the societies which it had helped to create. In future the State Exchange must be recognized simply as the executive embodiment of all the local Exchanges, whose creature it becomes.

State Board of Horticulture. There is in the minds of many a very definite fear that the State Board of Horticulture will be included in the legislative condemnation which is just now the rule at Sacramento. It is feared that the Legislature will not discriminate between an agency which is faithfully doing necessary public service and other agencies which do little more than draw money out of the public treasury, waste it in extravagances or employ it in corrupt ways. However, from what we can learn there seems little danger that any step will be taken which will stop the work being done by this Board. As yet no bill hostile to it has been proposed and nothing seems in prospect which need give fruit growers any alarm.

Cooked Fruits at the Food Show. It is very gratifying to know that the free provision of properly cooked dried fruits to all comers, which was so notable a feature of the late Pomological meeting at Sacramento, is to be repeated at the Pure Food Show which opens in this city on Monday next. Prof. Allen, at a very considerable sacrifice to himself, has consented to superintend the work—a fact which fully assures its being done in the right way. All varieties of California dried fruits will be cooked in public and served to all who want it free of charge, and free instruction will be given in the processes of preparation for the table. The value of this is very great, for it not only calls attention to our fruit product, but shows people how to make use of it. The dried fruit kitchen at Sacramento was

not only a revelation to the Eastern visitors, but as well to the housewives of Sacramento, many of whom declared that never before had they comprehended the uses to which our dried fruits may be put. It is believed that this work, persistently carried on here and abroad, will vastly increase the market for our cured fruits. The expense of maintaining the kitchen at the Pure Food Show will necessarily be considerable, and it will in large part be borne by the State Board of Horticulture, it being clearly within the lines of the work which it is commissioned to do.

The Situation as to Wheat.

In the statistics of the world's wheat supply as reported at the first of the year there is a crumb of comfort for those who have waited long and patiently for an upward movement of wheat prices. It looks as if the decline had at last reached a point where it had been met by a decrease of production sufficient to stay the price. Taking the world at large, the stocks as reported January 1st are a little less than at the corresponding date one year ago. The figures are: Jan. 1, 1895, 184,753,000 bushels; Jan. 1, 1894, 190,223,000 bushels. The difference of six million bushels is very slight indeed, but it is on the right side and is believed to mark the turn of the tide. It makes no perceptible difference in the immediate situation, for there is still a prodigious oversupply, and ruinous prices still rule; but it indicates better things for the future.

In all the older countries where land is valuable the production of wheat shows a marked falling off. In England the area planted to wheat is very much reduced as compared with a few years back. It is understood that India is in a measure drawing out of the market, for there is no profit to her people in growing wheat at present prices. Only in the Argentine Republic is the industry still expanding, and that country will probably continue a great producer of wheat. The American production for last season was up to the average, in spite of low prices, and it is promised to repeat the performance this coming season. Whether in the long run we can compete successfully with the cheap land and cheap labor of the Argentine remains to be demonstrated, but there is certainly no disposition to give way at the first assault.

While the general situation is thus significant of better times ahead, the immediate situation in California is not what we would like. The "Deal," or speculative syndicate, of which we have often spoken, is at last out of the market, but it holds in warehouse at Port Costa a vast store of wheat—generally estimated at 160,000 tons—and this in the nature of things is a standing menace, for it is possible at any time to be thrown upon the market to its utter demoralization. Much of this wheat has been brought over from the season of 1893, and is therefore dangerous to hold. Another danger in connection with the facts above stated is their possible effect upon the freight situation. Last year, by diminishing the shipments of wheat and depressing the rates of freight, the "Deal" made a bad season for shipping; and the consequence is that ship owners are fighting shy of San Francisco. The prospective tonnage supply is very short, even for the ordinary volume of traffic, and if, in addition to the normal supply for shipment, there should be added the vast stock now held by the "Deal," it would make a wide disproportion between the amount to be shipped and the available tonnage. In such a situation, the natural result is a boom in freights. This—in view of the inevitable relationship of the price of freight to the local price of wheat—would mean disadvantage to the producer. Whatever amount the ship owner might be able to exact in excess of the normal tonnage rate must, in the nature of things, be taken from the price paid by the exporter to the producer.

The hope is, of course, that the managers of the "Deal" will unload in such ways and at such times as will least disturb prices. This will naturally be their policy, since, as large holders, they are interested in maintaining prices; but the fear is that they may find themselves in a fix where they must do, not as they would, but as they can. The danger is, perhaps, not very great. We have given the facts, not to add to anybody's distrust of the market, but because it seems right that the farmers of the country, who are directly interested, should know the inside of the situation.

From an Independent Standpoint.

In another column there appears information which will be read with satisfaction by those who have long waited for better prices in the wheat market. Reports of the world's wheat stocks indicate that the decline has reached its lowest limit, and that from this time on conditions are likely to be a little more favorable for the producer. It is hardly necessary to say that the RURAL PRESS hails this prospect with satisfaction; but it must add that it has small hope of anything like normal conditions in the world's wheat market until there shall be such readjustment of money systems as will do away with the silver discount. Here is the situation: In the countries which compete with us in the wheat trade—in Argentina, in India and in southern Russia—the currency is silver alone. For all local purposes silver is as good as it ever was, being accepted readily in all the operations of business. In buying wheat in these countries the European merchant pays wholly in white metal, which he buys in Europe or America for about half of what he had to pay a few years back. For example, fifteen years ago an English sovereign (\$5) would buy fifteen Indian rupees, while to-day it will buy thirty. Now, since the rupee is accepted in India to-day just as it used to be, the gold sovereign (when invested in rupees) will pay for twice as much wheat as it used to. In other words, the decline of fifty per cent in the value of silver has practically reduced the price of wheat one-half. As in India, so the principle applies in other silver countries, and since we have to compete with them in the wheat trade, prices with us are directly affected. Miscellaneous circumstances have to some extent aided the recent downward movement in wheat, but in our judgment the chief reason why the old California price of one dollar per bushel has been succeeded by a price of approximately fifty cents per bushel, is that silver is worth only half its old price in the European and American markets, while it still goes current on the old terms in the silver countries. There are indications in India—where there is almost universal bankruptcy under the injustice of the silver discount—that this system cannot always be worked, but in the Argentine and in southern Russia, where the people are grossly ignorant and profoundly conservative, the game goes on as successfully as ever. What is needed—what in our judgment is absolutely essential to the financial health of our own country and of the world—is the restoration of silver to its old relation with gold. This, we believe, can only be brought about through international arrangement, and such an arrangement ought to be the settled purpose of American policy.

All of which brings it painfully to mind that there is in fact no such thing as an American policy. We have shown great capacity in political self-control and in the construction of governmental machinery; but we have failed miserably in our efforts to make a policy—relative to finance or anything else—really representative of American ideas and backed by the national strength. Possibly, this will be denied, for the protectionist, the free trader, the champion of tariff for revenue, the gold money man, the green-backer, the silverite—each of these will declare that his particular specialty is "the true American policy"—but this does not make it so. A political idea which cannot maintain itself with certainty through two successive elections, which is persistently and violently opposed by a large part of the people and which is liable at any time to be overthrown, cannot reasonably claim for itself the character of a national policy. For example, the RURAL PRESS believes, with reference to the tariff, that Protection in equitable and reasonable degree is, in our situation, a wholesome principle; but under all the circumstances of the time we cannot claim for it the status of an established national policy. It takes something more than the backing of individual opinion or of a party to make a national policy—in truth it takes nothing less than the acceptance and approval and support of approximately all the people. The mischief is that we are trying to solve scientific and social and philosophic problems by political methods. As Republicans and Democrats and Populists we are fighting over matters which should be considered

wholly apart from partisan motives. Brass bands, torchlights and passionate oratory have no just relationship to the tariff or money questions and any adjustment made under their influence is much more likely to be wrong than right. These are questions which should be determined upon broad considerations after careful study and wholly free from partisan motive. England does this with respect to finance and she makes the world pay tribute to her. Administrations change, men and parties come and go, but her national policy does not change. Is the inability to make a stable public policy a necessary and permanent defect in the American system? Are we to be forever batted back and forth between the theory of one party and the theory of another? Are industry, trade and commerce never to know three years ahead which way the national policy is going to face? Are these demoralizing conditions to continue; or shall we learn how to agree upon some just and permanent course of national action and be wise enough to hold fast to it until changing times enforce new motives?

There is a direct relationship between prudence in public expenditures and political morality; and by those whose eyes are open to the deeper significance of things, this fact appears the most important of the many considerations supporting the reform effort at Sacramento. Reasonable appropriations for legitimate purposes would make the State service a business instead of a political organization and would prevent the ten thousand petty corruptions which destroy the dignity of official life and degrade to a greater or less degree the character of everybody connected with it. Thus a system of reckless expenditure first impoverishes the tax-payer and then vitiates our public service. It is not too much to say that every dollar unwisely spent in an economic sense is a dollar viciously spent in a moral sense. It is the illegitimacy of our public expenditures which makes the scene alike pitiful and shameful just now to be witnessed at Sacramento. The State Capitol swarms with place hunters of every age, condition and sex—present not because they have any genuine taste or capacity for public service, but because it is known that effrontery, importunity and petty bribery may open to them small streams of illegitimate profit at the public cost. There is now in session at Sacramento a legislature elected in the midst of hard times and pledged to economy; but in spite of these facts, it is spending \$728 per day for clerk hire. Of course, everybody knows that this is unnecessary and without excuse; that the legislature would be better off if it would go about its work unannoyed by a swarm of sinecure employes. It is illegitimate, it is vicious—but it goes with the system and will continue until the system shall be superseded by another founded upon and limited by the necessities of the public service. Another fact very notable at Sacramento just now is that funds appropriated for the promotion of certain large public intents are being spent to secure still further appropriations. Thus, State money given into the hands of commissions is being used to perpetuate the life of these commissions rather than for the purposes for which it was (with rather more than less impropriety) originally designed. It might further be shown how there is at Sacramento a powerful lobby of present officials, of prospective officials and of political managers united in a defensive fight for the system as it now exists. These facts illustrate the connection between public extravagance and political immorality; and they afford the best possible reason—a reason even more vital and profound than the purely economic motive upon which the reform movement is founded—why the whole system should be swept out of existence. Does anybody suppose for one moment that, if State appropriations were given only to legitimate uses, and if places and salaries were limited to legitimate service, that the gang which now discredits the State and degrades itself would be found at Sacramento?

News has been received of an abortive attempt to enthrone the deposed Kanaka queen. A half-caste Hawaiian named Wilcox collected a force of 250 natives in a mountain stronghold near Honolulu, secured a thousand stand of arms and was making ready to attack the Government House in the name of the queen when his plans were reported to the au-

thorities. He was attacked in his retreat and his forces routed, with some loss of life on both sides, the principal casualty on the Government side being the killing of Charles Carter, a young man who was one of the original commissioners to Washington and well known in the United States. Order was promptly restored and affairs were moving along in their usual channel when the steamer left Honolulu. This little passage at arms in mid-Pacific has been made the occasion of very severe criticism in the Senate and throughout the country, of Mr. Cleveland. Some months ago, Admiral Walker reported that a revolutionary attempt was bound to be made at Honolulu and advised specifically that a United States ship be kept in the harbor, ready at a moment's notice to protect American citizens and their property. This counsel was disregarded; the event came when there was no United States ship within a thousand miles; and that great loss of American life and property did not follow was due to the accidental fortune which brought the plans of the rebels to the authorities before they were able to carry them into effect. No immediate renewal of revolutionary effort is looked for, but Mr. Cleveland has been roused to the possible danger and has dispatched the cruiser Philadelphia to the Islands. The whole matter has had the effect to revive annexation sentiment in this country.

The agitation concerning the San Francisco police commissionship, of which we wrote last week, has advanced to the stage of a fight in the courts. Mr. Gunst declines to recognize the authority of Gov. Budd to remove him and is supported in this attitude by his associate commissioners (Alvord and Tobin), who decline to recognize the Governor's appointee. This puts Mr. Menzies in a position where he must fight for his claims, and he has made formal application in the courts for an order to compel Alvord and Tobin to recognize his commission from the Governor. In the meantime, Gov. Budd, fired to indignation by the course of Alvord and Tobin, declares that he will remove them, and has named James V. Coleman and L. R. Ellert as his prospective appointees.

The election of Hon. George C. Perkins to the U. S. Senate, which occurred at Sacramento on Tuesday, was the best practicable outcome of the situation. Mr. Perkins is not an ideal Senator, but he is at least a respectable and presentable man who may be depended on to perform the routine duties of his office with intelligence and fidelity. His election is for the unexpired term of the late Senator Stanford, and he will hold until March 4th, 1897. De Young, who was Mr. Perkins' most noisy competitor, got barely sixteen votes in the two houses.

Gleanings.

HEALDSBURG is talking about putting in a creamery.

THE Zumwalt Creamery, says the *Visalia Delta*, cannot keep up with the demand for its butter product.

SANTA BARBARA is preparing for its annual flower festival. The whole community is joining hands to make it a notable event.

THERE is a movement on foot at Modesto looking to the appointment of a horticultural commissioner for Stanislaus county.

THE *Tulare Register* reports that the Porter Packing Co. is already buying the yield of vineyards in the vicinity of Porterville for the season of 1895.

THE Tulare Board of Supervisors have appointed D. J. F. Reed as Horticultural Commissioner to the vacancy made by the resignation of J. H. Morton.

CLOVERDALE will hold its third citrus fair on Feb. 8th, 9th and 10th. The executive committee is composed of John Field, I. E. Shaw and L. Halloway.

MR. C. P. BAILEY of Santa Clara Co., the well-known breeder of Angora goats, shipped twenty-five bucks, worth \$100 each, to Cape Town, South Africa, last week.

A CREAMERY designed to work up the milk product of 1500 cows is about to be put in at Bodega. The directors are: J. D. Williams, L. S. Goodman, G. W. Smith, T. B. Joy and B. B. Biaggi.

BLACKS (Yolo Co.) letter in *Woodland Democrat*: The farmer who makes up his mind to buy nothing that his own land will produce, and then gives the plan a fair trial, will make a long stride in the direction of getting ahead in the world.

REDLANDS Facts: Colton has shipped but two cars of oranges thus far this year. The Exchange there is holding back till the fruit reaches the \$3 point. Redlands people do not consider that the best policy, as the loss from culls will exceed the increased value of the fruit. In value per box the Colton idea may make the best appearance at the end of the season, but it will not win in regard to the actual profit per acre.

Convention of the Fruit Exchanges.

The Authoritative Statement by Manager Adams of What Was Accomplished at Last Week's Meeting.

SAN FRANCISCO, Jan. 21, 1895.

In response to many inquiries respecting the action of the late Convention of Fruit Exchanges, I make the following statement:

It was a purely business convention whose members had written authority to represent important interests. There were represented in the convention twenty-one local Exchanges and Unions and nine individual growers representing important interests, and who qualified for membership by expressing in writing their desire and intent to co-operate with the Exchanges upon equal terms. None of these gentlemen were officially invited—the intention being to first consolidate the Exchanges themselves—but they were unofficially given to understand that they would be very welcome, as they were. The Exchanges unquestionably desire that all large growers not connected with any Exchange shall unite with them on equal terms.

All fully organized dried fruit Exchanges north of the Tehachapi but two were represented, and from these there are unofficial assurances of their intention to act with the rest.

Fresh fruit shipping associations, representing a majority of the output of fresh fruit shipped in a co-operative way, were represented, and a committee from those associations was appointed to confer with the others.

Lack of complete organization of the southern California deciduous fruit interests, sufficient to confer real representative power on delegates, prevented representation from that section, but our correspondence indicates their readiness to unite.

The real co-operative movement of the San Joaquin raisin interest was fully represented and heartily in accord.

While all the delegates had written authority to consider certain specified topics, they had no power to absolutely pledge their constituents. The action of the convention will therefore go back to the Exchanges and Unions for ratification; it will there be fully discussed by the full boards, and, when ratified by them, will rest upon such a broad basis of intelligent support as no co-operative movement in this State has ever yet had.

As a business convention, discussing the business and financial affairs of the co-operative element of the State, its sessions were necessarily private; and such accounts of its proceedings as I have seen in the daily press not only did not cover the ground discussed, but often gave wrong impressions of the acts of the convention. All who desire to unite with us can readily get full information.

Without attempting to report the proceedings of the convention, I may state briefly what will be the effect of the ratification of its acts by the constituent bodies:

1. Every Exchange, and every individual grower who joins us independently, will have placed in its or his hand, direct connection, through responsible agents, with every existing market and every new one which can be created. This connection will be of the same kind and cost the same money, if used, as the connections now had by the largest Exchanges and commission houses.

2. Each Exchange and contributing individual will be supplied confidentially, and daily when necessary, with all attainable information required for the prompt and intelligent marketing of its or his crop.

3. Local public Exchanges, presumably to be conducted by local people in the name of the California Fruit Exchange, will be established in such localities as desire them, where, upon appointed sales days, all members who so desire may publicly buy or sell our dried products.

4. The facilities being thus provided, each Exchange or individual is left to sell when and where and to whom he pleases. What is paid for are the facilities for sale and the information.

5. The way is opened for any closer connections among growers through the California Fruit Exchange, which experience may prove desirable.

6. The California Fruit Exchange, as it will hereafter be constituted, will be practically the embodiment of all existing and future local Exchanges, together with such independent individuals as may join us.

7. The general Exchange will be supported by an annual uniform assessment upon the sales of each Exchange, Union or individual. We all pay alike and obtain the same advantage.

8. The Exchange will be open to all who desire to join it.

9. For convenience, and indeed necessity, the State Exchange will maintain its separate corporate existence, but it will be owned and controlled by the Exchanges, Unions and individuals who pay its expenses, and be managed by their representatives.

10. In the fresh-fruit branch the lines have been laid down whereby all that can at present be accomplished by any agency that can be created, will be done, and reliable data and studies made for more effective measures in the near future. The exact

language of the committee on the fresh-fruit trade is as follows:

Resolved, That it is the sense of this convention that the California Fruit Exchange, as it will be hereafter constituted, can profitably serve the fresh-fruit trade in the following particulars:

1. It can watch over the promised expediting of fresh-fruit service as promised by the railroads, and by frequent consultation with the railroad officials ascertain and make known the degree of perfection or imperfection maintained, and whatever can be done either by the railroads or the growers to improve the efficiency of the service.

2. It can cause accurate official experiments to be made under disinterested inspection of new devices for refrigeration and other devices for packing and shipping.

3. It can, if proper Eastern representation can be secured, obtain accurate official reports upon existing Eastern abuses in the fresh-fruit trade, with names and dates of instances in sufficient detail to ensure correct knowledge of usual and average conditions, with the remedies, if any, which can be applied, by united action.

4. It can represent that interest in any formal consultations which may be necessary or wise with those engaged in the business of shipping fresh fruits, with the view of remedying any abuses which may be found to exist in that department.

5. It can obtain and make known the prospects of crops in all competing fresh-fruit districts, with the dates upon which their products may be likely to appear in the markets in competition with our own—the last to be wired to us in season to permit all to exercise judgment in forwarding.

6. That all fresh-fruit co-operative organizations who pack and sell as growers, and all persons engaged in the same business, and sellers of fruit grown by such persons, shall become eligible to all privileges to which dried-fruit co-operative companies have by becoming stockholders of the State Fruit Exchange, and shall pay the same percentage on gross sales of said green fruit.

All the above being preparatory and looking to effective remedial action, whenever sufficient reliable data have been accumulated to justify such action.

The manager of the Exchange is requested to officially communicate with the Executive Board of the Southern California Fruit Exchanges, and ascertain whether it would be agreeable to them for the State Exchange to unite with them in the support of an Eastern agency, upon the basis that they pay the salary and direct the agency from December to June and the State Exchange from June to December; and if so, what would be the expense to this Exchange.

The Committee on the Fresh Fruit Trade is requested to ascertain what number of fresh-fruit shipping associations or individuals are willing to join the Exchange for the above objects, with the probable value of shipments from each, and to report whether in their judgment the revenue from such associations on the same ratio that dried-fruit associations pay is likely to be equal to the expenditure incurred in the fresh-fruit interests.

That in our judgment the railroads should assume the duty of supplying whatever form of refrigerator cars may be found best, without the intervention of refrigerator companies, thereby making possible at least a reduction of charges equal to the present profits of the refrigerator companies.

H. E. PARKER (Penryn).
J. A. WEBSTER (Vacaville).
J. B. BURRELL (Wrights).
D. C. VESTAL (San Jose).
GEO. D. KELLOGG (Newcastle).
Committee.

On motion the report of the Committee on Green Fruits was adopted.

There was represented at the Convention an output of not less than \$2,000,000, and probably over \$2,500,000, and an additional output of not less than \$500,000 is now ready to accept the work of the Convention. This quantity alone is sufficient to support the central Exchange by a tax which will be felt by no one, and which will make the actual aggregate expense of marketing not greater, but less.

The above outline expresses not only the views of the Convention, but those which the stockholders and directors of the California Fruit Exchange have had from the beginning.

In order to afford time for the ratification of the work of the Convention by the several Exchanges, and to give the latter, after uniting in the State Exchange, to have their proper influence in the election of directors, the annual meeting of the stockholders of the California Fruit Exchange was adjourned to meet on Thursday, Jan. 31st, at 10 A. M., at the office of the State Board of Horticulture, 220 Sutter street, San Francisco. EDWARD F. ADAMS, Manager California Fruit Exchange.

Following is a complete list of the delegates present at the meeting:

California Fruit Exchange—B. F. Walton, Timothy Paige, F. N. Woods, John Markley, Philo Hersey, E. A. Wheeler, C. H. Norris, D. T. Fowler, Ben. H. Allen, W. J. Dobbins, C. C. Thompson.

Santa Clara County Fruit Exchange (San Jose)—Philo Hersey, H. G. Keesling, G. A. Bean, J. T. Grant, C. F. Wyman, Noah G. Rogers, F. M. Righter, H. C. Morrell.

West Side Fruit Growers' Association (Santa Clara)—S. P. Saunders, R. W. Hersey.

Willow Glen Fruit Union (Santa Clara Co.)—David Cobb, C. W. Cutler, G. W. Worthen, C. R. Williams, A. H. Upton, Hiram Pomeroy, Edward Maynard, E. M. Thomas, J. W. Badger, E. A. Wilcox, E. C. Stowe, Mrs. J. H. Starke.

Campbell Fruit Union (Santa Clara Co.)—F. M. Righter.

East Side Fruit Union (Santa Clara Co.)—G. A. Bean, H. L. Stevens, A. Y. Chamberlain, A. H. Stinson.

Berrysessa Fruit Union—J. T. Grant, D. C. Vestal.

Pajaro Valley Fruit Exchange (Watsonville)—J. A. McCune, Wm. Henderson.

Napa Fruit Company (Napa)—A. D. Butler.

Kern County Fruit Exchange (Bakersfield)—R. Frissolle, H. C. Park.

Sonoma County Fruit Exchange (Santa Rosa)—E. W. Devcreaux, H. Lapham, W. H. Harris, C. S. McLellan, E. Hart.

Corralitos Co-operative Drying & Canning Co. (Corralitos)—H. M. Rider, A. M. Tate.

Mt. Shasta Fruit Association (Anderson)—L. C. Frisbie, Wm. Weaver.

Sutter, Butte & Yuba Co. Fruit Exchange (Yuba City)—B. F. Walton, H. P. Stabler.

Oswald Fruit Association (Yuba City)—F. Hauss.

Niles Co-operative Dried Fruit Union (Niles)—H. J. Tilden, J. C. Shinn.

Easton Packing Co. (Fresno Co.)—Robert Smith.

Shima Raisin Packing Co. (Fresno Co.)—Geo. W. Terrill.

Orosi Fruit Exchange (Tulare Co.)—A. J. Bump.

Vacaville Dried Fruit Exchange (Vacaville)—G. W. Crystal

(by S. W. Hoyt, proxy), J. W. Gates, W. J. Dobbins, J. A. Webster.

Producers' Raisin Packing Co. (Fresno)—A. H. Powers, D. W. Parkhurst, W. F. Forsey.

Contra Costa Co. Fruit Union (Martinez) S. Potter, A. B. Coleman.

Penryn Fruit Co. (Placer Co.)—H. E. Parker.

Santa Cruz Mt. Fruit Exchange (Wrights)—E. W. Marston, J. B. Burrell, Edward F. Adams.

Winters Fruit Exchange (Winters)—T. S. Taylor, Geo. North, A. L. Stinson, Wm. Brink, J. B. Griffin.

Auburn Fruit Co. (Placer Co.)—W. E. Duzan.

California Fruit Association (Vacaville)—J. W. Gates, J. A. Webster.

Individual Members—T. H. Derby, F. H. Pomeroy, W. H. Gilmore, C. C. Agee, Geo. D. Kellogg, J. D. Caune, D. T. Fowler, Dr. C. M. Bates.

FORM OF THE PROPOSED ORGANIZATION.

In addition to the information given above by Mr. Adams, we learn that the form of the proposed organization was agreed on by the proper committee, as follows:

Resolved—

1st. That we recommend and urge that the fruit growers of this State unite in co-operative companies in their several localities for the better curing, packing and otherwise handling their fruit products.

2d. That these several co-operative companies unite in and form one central Exchange.

3d. That the California Fruit Exchange be said central Fruit Exchange.

4th. That in the formation of any plan we favor the Exchange method of selling.

5th. That each co-operative fruit association become a stockholder of the California Fruit Exchange.

6th. That a tax for the support of the central Exchange be levied pro rata upon the gross sales of the fruit product of the stockholders.

7th. The articles of incorporation and by-laws of the California Fruit Exchange are hereby approved.

Respectfully submitted,

NOAH G. ROGERS,
S. P. SAUNDERS,
A. N. POWERS,
E. W. DEVERAUX,
S. W. HOYT,
F. M. RIGHTER,
D. T. FOWLER,
H. C. PARK,
H. E. PARKER,
Committee.

This report was read and discussed section by section and unanimously adopted.

Rainfall and Temperature.

The following data for the week ending 5 A. M., January 23, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.	Total Seasonal Rainfall to Same Date.	Average Seasonal Rainfall to Date.	Maximum Temperature for the Week.	Minimum Temperature for the Week.
Eureka	2.62	34.85	10.70	52	36
Red Bluff	3.98	22.30	14.37	46	34
Sacramento	3.46	19.70	9.19	54	38
San Francisco	2.76	19.66	12.75	54	42
Fresno	1.86	8.79	3.84	56	40
Los Angeles	2.52	11.02	5.32	62	40
San Diego	3.02	9.44	3.22	66	42
Yuma	0.76	2.97	1.42	64	42

Mr. Keesling's Cherry Article.

TO THE EDITOR:—I note in last week's RURAL the reprint from the *Cultivator* of Los Angeles, on the matter relating to cherries. There was an error in the article as printed, which I see you did not notice. It reads: "One hundred and fifteen carloads were canned." It should read, *One hundred and fifteen carloads were shipped East.* I have no means of knowing how many were canned, but think that more were canned in 1893 than in 1894.

I am not planting any fruit trees this winter, believing that it is a good time to stop and let another season's crop and sales point the way for further planting. I would be glad to read the opinions of some of the RURAL readers who think they know what fruits are best to plant at this time, giving their reasons therefor. H. G. KEESLING.

San Jose, Jan. 14, 1895.

No subject is more interesting or important than Mr. Keesling proposes. Who will tell what to plant this year, and why?

Automatic Frost Signal.

TO THE EDITOR:—Some years ago I read in your paper an article saying that some one had an automatic frost signal that would ring a bell when there was danger from frost.

If you can tell me who has it or who makes it you will confer a great favor on an old subscriber. C. W. BRETT.

San Jose.

We would like to know more about this frost alarm. It is some years since it has been publicly mentioned and the result of experience should now be made public. We shall be glad to hear from any one who has such a device or knows about it in the hands of others.

HORTICULTURE.

Pomological Progress.

At the meeting of the American Pomological Society at Sacramento last week, of which general mention is made elsewhere in this issue, the President, Mr. P. J. Berckman of Georgia, gave an able annual address from which we take the following significant paragraphs:

We rejoice that we are afforded this opportunity of greeting our Pacific friends upon their own hearth and form new friendly ties, which shall be as everlasting as are the ethics of our society. In reviewing the work of the American Pomological Society since its inception in 1848, and the comparatively restricted territory which it then covered, we stand amazed at the progress made in this science. In the early history of the society many problems relating to pomology were unsolved; scientific investigations had not received the attention which in later years have made clear what was once obscure, and many of the obstacles to successful fruit culture have been gradually removed by systematic scientific work. Our General Government has given material aid toward advancing our methods of production, by diffusing the results of the work of the various scientific divisions of the United States Department of Agriculture, but greater benefits have been derived from our State and local horticultural societies whose work is of more practical value for their immediate sections, and such of our States that have appreciated the value of their fruit products as a source of wealth have wisely given their aid to its progress.

Many States by legislative appropriations and legal enactment have so protected the fruit-growing industry as to have vastly increased their revenue and population and advance their educational and material progress. The magnitude of California's fruit industry is in a great measure due to the liberal course adopted by its State Government; older States may derive a practical lesson from these commendable principles, and be more liberal in giving the practical aid they have so far withheld. The establishing of State Experiment Stations sustained by Federal appropriation is wise in principle, and where such stations are conducted solely with a view of advancing all methods of culture they have been connected with good results.

Progressive Pomology.—We number now among us as co-workers your own Burbank, whose conscientious experiments have given you such new creations in fruits and flowers as has never heretofore been achieved. We honor him and gratefully acknowledge his efforts in advancing scientific pomology.

While the object of the American Pomological Society at its origin was the advancement of a scientific pursuit, its influence upon fruit culture became so marked that it was deemed necessary to devote a portion of its work to commercial pomology in order to improve the methods of bringing fruit products before the people, and thus materially aid both in the production of better fruit and educating the consumers as to their special value. The gradual and rapid changes which have taken place in our large market centers denote that this is due to a better knowledge of fruits by those who dispose of our products. Certain varieties of fruits owe the increase in their production to the intelligent manner in which our most progressive commission merchants bring these before the purchasing public, and many methods as to the proper handling of fruits for commercial purposes have been adopted from their suggestions and thus greatly benefited the producer. Many varieties of indifferent quality which formerly contributed to the bulk of our market products are superseded by better sorts, and are now seldom seen. In this commercial pomology has been greatly aided by scientific methods of cultivation.

Competition in Fruit Products.—The supply of products has kept pace with the gradual increase in the area of fruit culture, but the old methods of both supply and demand have been revolutionized with the advent of California products in Eastern and Western markets. Rapid transportation has solved the problem of increased production in your State, where fruits of endless varieties attain to such wonderful perfection.

The immense quantities of your attractive fruit which have of late years been so abundant in our Eastern markets have had the effect of cheapening fruits and bringing these within the means of those who were formerly debarred from their purchase and use, and also caused fruit-growers in other sections to so improve their methods of cultivation by a judicious selection of varieties and careful packing and handling, that the results of this competition have been most potent in advancing pomological progress and augur well for further improvement.

Cordiality Among Pomologists.—The cordiality which exists among the progressive pomologists of the world is to be commended; there is a freedom of that prejudice and jealousy which is so often manifested in other avocations. Our European friends, among whom we find men of the most advanced scientific attainments, greet their American co-workers with that spirit of friendship which is en-

gendered from mutual appreciation and esteem, and, as is shown by the special report of Felix Sahut, President of the Horticultural Society of the Department of Herault, France, in which the work of the twenty-third session has been extensively reviewed and commended as worthy of imitation by their own pomologists.

In asking your acceptance of this token of cordiality from our friends of the National Pomological Society of France I feel assured that you will unite in tendering them your fraternal greeting and well wishes for their success. The National Society of Pomology of France has also devoted a large space in several of its monthly bulletins to elaborated notices of our last session, and the following extract from their report will also be gratefully appreciated by all our members:

"The American Pomological Society can justly lay claim to its influence in the rapid development of the prosperity of the United States, a development of which we have fully noted the many great characteristics. Through its powerful organization the dissemination in fruit culture throughout the immense territory of the American Union is greatly due. It has also rendered a notable service to that country in increasing the fruit products which form such a large proportion of food elements, and these have given to the Americans another material for commercial exports. We think that we can draw from all this a valuable lesson, and for that reason we have considered it our duty to elaborate this subject in going beyond the limits of a mere notice."

Amateur Fruit-Growers.—When this society sprung into existence its membership was in the main composed of amateur fruit-growers—men whose love for this pleasant occupation prompted them by united action to diffuse the result of their experiments without other reward than the improving of our fruit resources. Their unselfish labors, while bringing to them an abundant return of personal gratification and pleasure, have, however, resulted in giving financial aid to the professional pomologist, who, being unable to devote either time or money toward the production of new or improved fruits, has found his pursuit made easier and more remunerative from the work of the amateur. He has drawn from the latter the material which has been the basis of his commercial success; without this great store of pomological wealth his pursuit would have been practically impossible.

While a large number of American nurserymen and commercial fruit-growers have failed to affiliate with this society, we acknowledge the great aid which many of those who have become the leaders in that profession have freely given this organization, and who are to-day its most loyal and active supporters. This society must retain its original distinctive characteristic scientific amateur line of work, as pomological progress must in the end come from the work of amateurs, and those who are reaping the harvest should recognize the importance of aiding in its future welfare by becoming active co-workers and contributing their share toward an organization that has in a great measure been the foundation of the success in their commercial venture. Our older members are leaving us one by one; those that are still remaining look to our younger men to perpetuate the great work which has brought American pomology so prominently before the civilized world and given such wonderful sources of wealth to this country.

We cordially invite the attendance at our session of our young men who look upon fruit-growing as their avocation. We desire to encourage those who may entertain a latent fondness for rural pursuits by listening to the teachings of men whose long and practical experience will aid them to solve hitherto unexplained problems and thus aid them in their prospective career. I earnestly trust that this appeal will meet with a ready and generous response; we need you now that you may be prepared to succeed us in our endeavors to promote human progress. We rejoice at the increased strength of many State Horticultural Societies, and especially the liberal appropriations which they receive from their respective State Governments, and as many of these legislative grants are gradually increased it is evident that this is because of a corresponding increase in their State's revenue. In this way the co-operation of their most active and best citizens is enlisted, as the surest means to improve their productive resources by a judicious expenditure of public funds.

Permit me, therefore, to urge upon every member present the necessity to use his efforts in bringing before their respective State's authorities the importance of sustaining their State Horticultural Societies by a liberal annual appropriation. It is through societies that the work of the American Pomological Society can increase in usefulness, and this is only possible by mutual co-operation.

Persimmons from California.

Large and beautiful Japanese persimmons from California are still in the market and enterprising growers of this fruit are endeavoring to popularize it by every means possible. One method of work in this direction is to wrap every fruit in a square of thin paper on which are printed the following direc-

tions: "Place this fruit on a shelf or sideboard for ornament until it becomes soft. It will shrink somewhat and turn to a dark color; it must not be eaten until it is soft in every part, which will be the case if it ripens properly. It should then be peeled from the apex. The thin skin will leave pulp readily." To this may be added that a Japanese persimmon, when set in a cut-glass or silver cup of proper size, is a beautiful object. It is also very nutritious, and when properly cooked its delicate flavor is very refreshing. It certainly must prove one of our most popular dessert fruits when better known.—N. Y. Garden and Forest.

THE STOCK YARD.

American Beef Sound and Good.

J. Sterling Morton, Secretary of Agriculture, recently examined the microscopical department of the Bureau of Animal Industry at Omaha. In reply to the question as to the object of his visit to the packing-houses, the Secretary said:

"I am on a tour, investigating some of the charges of the European governments against American meats. Singularly enough, just at this time the searchlights of Germany and France are turned upon the methods of governmental meat inspection in the United States and I am creditably informed by a party of high standing, socially and politically, that certain foreign governments are exercising a sort of espionage over all the principal abattoirs of the United States. The object of this is, undoubtedly, to find, if possible, some dereliction of duty on the part of the meat inspectors. The foreigners may desire to make out a case against the sanitary condition of American cattle, and from that they premise to reduce the unhealthfulness and unedibility of canned and otherwise cured American beef and other meats.

"But during the year 1894 the United States Department of Agriculture inspected more than 12,000,000 head of cattle. Up to date not one of all these millions has been demonstrated to be otherwise than in a sound sanitary condition. It is true, however, that within the last four months, from a certain foreign port, a case of contagious pleuro-pneumonia in an American fat steer was proclaimed. But the department demanded at once by cablegram the number of the tag on that animal and the transmission of a part of the lungs. The tag came, the animal was traced by its number to a farm where it was born and raised in the blue-grass region of Kentucky.

"The animal had what veterinarians term transit pneumonia; i. e., a cold taken on the Atlantic voyage. The investigation proved there never had been a case of pleuro-pneumonia nor any other communicable or contagious disease during the last ten years. The European diagnosis seemed to have been made to order for the purpose of furnishing a sanitary reason for the exclusion of American live-stock. The truth is that there has not been a case of pleuro-pneumonia among the cattle herds of the American Republic during the past three years. Nor was the sanitary condition of American herds or flocks ever more satisfactory than it is to-day.

"As to microscopic inspection," continued Mr. Morton, "it will continue only for those houses which have a German or French demand for export hog products. During the last fiscal year 15,000,000 more pounds of pork were microscopically inspected than during any preceding year. All that inspection was made for the purpose of satisfying the demands in that regard for the German and French consumers. And while it cost the people of the United States a considerable sum to thus cater to these two foreign markets, the amount expended for microscopic inspection was \$78,000 less than during the preceding year.

"The number of cattle inspected for the fiscal year more than doubled that of any previous year. The expenses of cattle inspection was reduced from 4½ cents per head to 1½ cents per head. This last year we inspected more than 12,000,000 head of cattle, and the highest number ever inspected during any previous year was less than 5,000,000.

"It is my ambition," said the secretary, "and my duty to make the United States meat inspection so thorough, so efficient and just that not a single animal or a single pound of meat unfit for human food can possibly be passed on to the interstate or export markets. The stamped tag of the United States inspection should be, either at home or abroad, as satisfactory a guarantee of edibility as the certificate of the assayer of the United States Mint is of the fineness and weight of an ingot of gold. It is, therefore, the intention of the United States Agricultural Department to give its certification of cattle, swine and all the products thereof the highest money-purchasing power that their commodities can be endowed with anywhere in the civilized meat-eating world."

LATE dispatches from Riverside state that the continued heavy rains have delayed the shipment of oranges. Until the late rains but few oranges were sufficiently colored to be fit for shipment but since then the fruit has ripened very rapidly.

THE POULTRY YARD.

Now and Then.

TO THE EDITOR:—There is an old adage, says Mason C. Weld, and one the truth of which is proved in our experiences almost every day, that "there is nothing new under the sun," and probably many of those who can remember the poultry mania of forty years ago, may have been led to think that the undoubted revival of interest in poultry which has taken place within the last few years, is simply a repetition of that mania. Then, as now, poultry sold for fabulous prices, and it was no uncommon thing to hear of a bird having realized \$200, or a setting of eggs \$25; and the fact that in 1882 a game cock was sold at Birmingham for \$500, and at the Crystal Palace shows a game bantam cockerel was claimed for \$250, would at the first sight appear to warrant such a conclusion as I have named. But, on considering the matter a little further, we find a marked difference in every respect, save only the large prices paid for specimens.

The mania of forty years ago was almost entirely relating to one breed—the Cochin—whereas now all varieties of poultry receive a share of attention, although there are some greater favorites and more valuable than others. Then, the general belief was that the fowls named—which, by the way, were new, and had only recently been imported from China—were the greatest layers and the best table fowls ever known, that their importation was of national importance, and that to obtain possession of some of these birds was a sure road to wealth.

At the present day, poultry fanciers, i. e., those who go in for poultry breeding as a hobby, without caring much for the economic qualities of the birds, and who are the persons that pay such high prices for first-class specimens, have no claim to be regarded as public benefactors, and neither deceive themselves nor any one else by posing in such a manner. They say plainly that they keep poultry as a hobby; it ministers to their pleasure when striving after an ideal standard, which may or may not improve the birds so far as their profitable qualities are concerned, but for that they care little. They claim the same liberty as the fox-hunter or the sportsman, and are willing to pay for their pleasure; and if they pay very high prices for birds they do so in the same way as others do for fancy stock, and can generally get their money back again. Therefore, it will be seen at once that there is a very marked difference between the poultry fanciers of forty years ago and those of to-day, and there is very little probability of any repetition of the collapse of the present mania, if such it can be called, for there is now no deception as to the end in view.

EGGS.

The prices now paid for fresh eggs, not only in the cities but in all great manufacturing centers, would have been regarded as fabulous a few years ago. Thirty years ago fresh eggs could be bought at twelve and one-half to twenty cents a dozen, but now these are seldom ever less than two cents each, and oftener three cents, four cents, and even five cents each. We have been informed by a lady, who lives within two or three miles of a military headquarters, that during June and July she can sell about thirty dozen eggs per week at sixty cents a dozen. They are sent for, to her own door, the cash paid down, and she could sell twice as many if she had them. This is undoubtedly an exceptional instance, but only exceptional as to the time of year, for the price is not an uncommon one for the winter season. Doctors, when ordering their patients to have eggs, nearly always insist upon their being fresh, as they know how much better they are than when even only a few days old. And cooks can tell the same story with respect to the way they use them. Only those who have kept fowls of their own, or been favored by getting properly fresh ones, know the real pleasure of eating an egg, and there are many who cannot eat one if more than three or four days old. And when we consider how important an addition, in its varied uses, an egg is to the meal, it will be seen how the matter comes home to every one, apart from all economic questions. H. F. WHITMAN.

Alameda.

A Hen's Rights.

As I have studied the hen and her peculiarities somewhat, says a southern California writer. I would say that what a hen wants is her rights. If she does not get them she will strike just when eggs are the highest. First, give her a good clean house; next, fresh water and change of feed. A hen does not object to wheat three months at a stretch, but longer than that makes her tired. A warm mash should be fed in the morning—say shorts, bran and milk; then a feed of wheat and corn in the evening; then, for a change, rolled barley boiled till it is soft, and boiled and mashed potatoes, when cheap. Cabbage, onions and red peppers chopped fine, once a week, are good

for laying hens. Never give more food than will be eaten up clean.

Give the hen a chance and she will pay 200 per cent on your investment. I had 125 chicks hatched in an incubator in March last. I gave fifty chicks to the tender care of a mother hen, and put the others in a brooder. The hen scratched and labored for her flock; I did the same for the brooder chicks and, if anything, I beat the hen. When three months old I sold the young broilers, which left sixty fine pullets. When six months old they commenced to lay. Eggs soon were twenty-five to thirty cents per dozen. Through November and December, two months, each pullet has averaged for eggs seventy-one and a half cents apiece, or a total of \$43. Feed for two months has been \$6, or ten cents a chick, besides having the milk from one cow to mix their feed.

Cost of Raising Chickens.

The Experiment Station at Geneva, N. Y., has just issued a report on an experiment conducted there to ascertain the cost of raising chickens. For the purposes of the experiment two breeds were selected—Cochins and Brown Leghorns. One hundred and seventeen Cochin eggs and one hundred and one Brown Leghorn eggs were set. In the case of the Cochin eggs, 46.1 per cent were represented by strong, healthy chicks. In the case of the Leghorns, 75.2 per cent were so represented. Charging the Cochin eggs at twenty-four cents per dozen, the cost of each chick, when hatched, including the cost of keeping the hens while setting, was 4.65 cents. Charging the Leghorn eggs at twenty-four cents per dozen, the cost of each chick when hatched, including, as before, the keep of the hens whilst sitting, was 2.82 cents. Taking the two breeds together, the cost of every strong, healthy chick hatched was 3.58 cents. The young chicks were kept indoors a few days and then put into an apple orchard and allowed to run at will. The food fed to the growing chicks was mixed grain, cracked wheat, skim milk, dessicated beef, and finely-cut fish bones.

When the young fowls were put into the poultry-houses and the sexes separated, which was for the Cochins at the average age of 109 days and for the Leghorns at the average age of eighty-four days, the Cochins averaged 4.05 pounds in weight and the Leghorns 1.83 pounds. The total cost of all food consumed up to this time averaged 19.17 cents per chick for the Cochins and 9.77 cents for the Leghorns. The cost per pound gain in weight made by the Cochins was 4.90 cents, and of that by the Leghorns, 5.65 cents. Including the cost of hatching, the average total cost of each chick at this time was 24.36 cents, and of each Leghorn 12.59 cents, or 6.01 cents per pound for the former and 9.88 cents for the latter. The Cochin pullets average 3.56 pounds in weight and the cockerels 4.52 pounds. The Leghorn pullets averaged 1.65 pounds and the cockerels 2.06 pounds.

The Cochin cockerels were fed separately for a short period and then caponized and used in another feeding trial. Had they been sold, when separated, at the local market price, twelve cents per pound, they would have more than paid the cost of food up to this time for all in the lot. The cost of feeding the pullets from this time (September 17th) until November 21st, was an average of 20.07 cents per fowl. Deducting the market poultry value of the cockerels at the time separated from the total cost of all the lot would leave the net cost of eggs, hatching and food for the Cochin pullets averaging 5.50 pounds in weight, 13.24 cents apiece.

The Leghorn cockerels were fed for some time after they were separated from the pullets before being sold. The cost of feeding the Leghorn pullets from September 7th to November 21st, was 13.09 cents apiece. Deducting the local market value of the cockerels at the time of the removal, from the total cost of all birds in the lot, would have left the total net cost for the Leghorn pullets averaging 2.81 pounds at 16.78 cents each. The sexes were about equal with the Cochins, but there was an unusual excess in the number of pullets among the Leghorns hatched (37 per cent. more pullets than cockerels), so that the poultry value of the cockerels represented a lesser proportion of the value of food consumed. Had the sexes been equal, at the same proportionate cost for growing, and considering the poultry value of the cockerels, the net cost of Leghorn pullets would have been 13.55 cents apiece, nearly the same as that of the Cochins.

In calculating the cost of the food used, wheat was rated at 65 cents per bushel, corn at \$20 per ton, corn meal \$22, wheat bran at \$18, buckwheat middlings \$18, wheat middlings \$20, ground oats \$26, linseed meal \$28, cotton-seed meal \$30, dessicated beef at two cents per pound, fresh bone at one-half cent per pound, and skim milk at twenty-four cents per 100 pounds.

It may be noticed that Leghorn eggs hatched more chicks than Cochin eggs; that fifty chicks from 100 eggs, under hens, were secured from Cochins, that the Leghorns ate less food; that the Cochins were much heavier at certain ages. It shows that six cents per pound covered the cost of the most expensive chicks. The experiment is a valuable one, and may be studied carefully with advantage.

THE DAIRY.

U. S. Supreme Court Says Butter Must Not Be Imitated.

The U. S. Supreme Court, the highest tribunal in the land, has declared that, to give a thing the semblance of butter which is not the true product of the cow is an offense against society. The decision was rendered in a case which went from Massachusetts on appeal from the law of that State, which declared that no compound manufactured of fat not butterfat could be sold in the State when made in imitation of yellow butter, but provided for the sale of oleo "in a separate and distinct form and in such manner as will advise the consumer of the real character, free from coloration or ingredient that causes it to look like butter." A salesman of oleo was convicted under this act and the case finally went to the United States Supreme Court, which affirmed the decisions of the lower court and declared the law sound. The court, through Justice Harlan, argues the case very clearly and cogently as follows:

It appears, in this case, that oleomargarine in its natural condition is of "a light yellow color," and that the article sold by the accused was artificially colored "in imitation of yellow butter." Now, the real object of coloring oleomargarine so as to make it look like genuine butter is that it may appear to be what it is not and thus induce unwary purchasers, who do not closely scrutinize the label upon the package in which it is contained, to buy it as and for butter produced from unadulterated milk or cream from such milk. The suggestion that oleomargarine is artificially colored so as to render it more palatable and attractive can only mean that customers are deluded by such coloration into believing that they are getting genuine butter. If any one thinks that oleomargarine not artificially colored so as to cause it to look like butter is as palatable or as wholesome for purposes of food as pure butter, he is already, as observed, at liberty under the statute of Massachusetts to manufacture it in that State or to sell it there in such manner as to inform the customer of its real character. He is only forbidden to practice in such matters a fraud upon the general public. The statute seeks to suppress false pretenses and to promote fair dealing in the sale of an article of food. It compels the sale of oleomargarine for what it really is by preventing its sale for what it is not. Can it be that the Constitution of the United States secures to any one the privilege of manufacturing and selling an article of food in such manner as to induce the mass of people to believe that they are buying something which in fact is wholly different from that which is offered for sale?

This question of the court, says the *Breeders' Gazette*, carries its own answer. In this city some manufacturers of butter and lard compounds are advertising them as substitutes of greater merit than the articles named, and if all manufacturers had dealt thus openly with consumers we should have been spared the necessity for restrictive legislation. Unfortunately, they at first assumed the right to sell these substitutes to people as the genuine articles, justifying the fraud on the ground that they were giving the public a better article than the genuine. Of course such sophistry cannot stand a moment's scrutiny.

The court thus disposes of the "original-package argument":

"And yet it is supposed that the owners of a compound which has been put in a condition to cheat the public into believing that it is a particular article of food in daily use and eagerly sought by people in every condition of life, are protected by the Constitution in making a sale of it against the will of the State in which it is offered for sale, because of the circumstance that it is in an original package, and has become a subject of ordinary traffic. We are unwilling to accept this view."

And so are all other intelligent and honest people. But observe this ringing declaration of our highest court—it cleaves the question to the very heart:

"The Constitution of the United States does not secure to any one the privilege of defrauding the public. The deception against which the statute of Massachusetts is aimed is an offense against society; and the States are as competent to protect their people against such offenses or wrongs as they are to protect them against crimes or wrongs of more serious character."

To sell an article for what it is not is an "offense against society." The Supreme Court never pronounced a fairer opinion. It does not declare oleomargarine an unwholesome product; it concedes its right to sale as food, but strikes from it the right to fly the golden-hued flag of nature's finest and most delicate product—butter from the milk of the cow. If oleo can make a market for itself the law will not interfere; but when it seeks to steal the market long held by a pure and unadulterated natural product the State can compel it to be honest. The public has vested rights which the greedy manufacturer of food substitutes cannot infringe.

THE FIELD.

Alfalfa Growing in Kern County.

C. L. Conner, Bakersfield.—I have grown alfalfa for the past twenty years, with from 1,000 to 12,000 acres, some on sandy loam river "bottom," and some on sandy desert lands. The plant is most productive on a sandy or loose loam surface, with a clay subsoil five or six feet below the surface, which assists in retaining moisture. Hardpan, when eighteen or twenty inches below the surface on irrigated land, does not materially affect the growth of the plant, but there is no profit with alfalfa on cold, wet ground. On lands here that have never been irrigated, the surface is always dry, sometimes to a depth of six or seven feet, but below that moisture continues until water is reached. Our California lands require no fertilizing for alfalfa, and the method of seeding is very simple. In December or January we plow the land to a depth of, say six or seven inches, and about the first of February sow thirty pounds of wheat or barley to the acre, harrowing thoroughly one way; then sow about eighteen pounds of alfalfa seed, harrow lightly, and, if the surface is rough or cloddy, pass a light roller or clod breaker over the field, leaving it in suitable condition for the mower as well as insuring the best retaining of the moisture. The seed may be sown any time during February or March, and the grain and young alfalfa should be ready to cut by the 1st of June, yielding about two tons to the acre—principally wheat or barley. We then irrigate, and by August 1st the alfalfa should be ready to cut, and will yield about three-fourths of a ton of hay to the acre. By the middle of October, we cut it for the third and last time that year. If allowed ten days to grow, it will then furnish good pasturage for all kinds of stock, if care is taken not to pasture it after heavy rains or during the forenoons, when the grass is moist from dew. The precaution is taken because of the danger of bloating, although in this dry climate, where the rainfall is not more than five inches during the year, there is little trouble from this source, and we allow the stock to run on the fields during all the months of the year. By seeding in February, we expect to have sufficient rain to bring up the crop and keep it growing until the grain is about six inches high, after which one irrigation will mature the grain and keep the alfalfa alive. The second irrigation is given as soon as possible after the hay is removed from the field, and the third after the second cutting, the water being passed quickly over the land, and not allowed to stand but four or five hours. To accomplish this, use a large head of water, rush it over the surface, and remember that it is as essential to get the water off as it is to get it on, allowing no lakes or ponds to remain longer than a few hours, else the plants will be drowned out. Our source of water supply is the Kern river, but farms located so as to not admit of the use of this are provided with pumping plants, using the "Byron Jackson Centrifugal Pump," usually a No. 6, with a six or eight horse-power engine, lifting the water from fifteen to twenty feet. Such a plant can furnish water sufficient to irrigate about ten acres a day, where the land is properly leveled before seeding. Too much stress cannot be laid on the importance of leveling the land, so as to allow of the covering of a large surface with a small quantity of water. It is better to have the water on one inch deep than a foot deep. Irrigation gives quantity, while quality depends largely on the curing. The plant is in its prime after the first year, and under proper treatment will last a lifetime, though the best results are obtained by plowing and reseeding every seventh or eighth year. With a damp soil and a rainfall of from ten to twelve inches, the crop will not need more than one irrigation, and that more to drown out the gophers than for any other benefit. We cut our crop of old alfalfa about the 1st of May, and expect about one and a half tons to the acre; then we can cut every sixty days after that until cold weather sets in, about the middle of October or 1st of November. We usually cut the first crop for hay when it is well blossomed out and the bloom of a deep blue; and when we wish to cut for seed we do not irrigate, as a heavy growth of grass will not produce seed. We never think of using a new field for seed, but much prefer an old one, with about half a stand, and do not crowd the growth; after taking off the first crop for hay, say between the first and middle of May, allow the seed crop to grow and mature the seed pods until some time between the middle of September and first of October, and then, under favorable conditions, there will be ripe, half-ripe and green pods and blossoms on the alfalfa when it is cut for the seed; the mowing should not be done until the older pods show signs of shelling out. Here, where we have no moisture in the atmosphere and the temperature is 110 degrees in the shade, we rake about two hours after cutting, cock up immediately, and haul in three or four days; the hay should be thoroughly wilted; but not dry, before raking, and the curing should take place in the cock. When this is properly done, the hay can be stacked in any form desired, with no danger of heating. Good alfalfa land near here is worth from \$75 to \$100 an acre. The cost of the application of water, when properly used, is about 10 cents per acre, and the cost of the hay in the stack

is about \$1.25 a ton. Contractors furnish machinery, labor, wire, and board and bale the hay for \$2 a ton. Preferred bales weigh 175 to 180 pounds, and baling in no way affects the keeping quality of the hay, which, if kept dry, will remain sweet and nutritious for several years. Good hay, baled and delivered aboard the cars, is now selling for \$8.50 a ton, and a fair average for a number of years would be \$6 a ton. A good stand of alfalfa should yield 500 pounds of seed per acre. We do all our own thrashing with our grain separators, Pitt's being the favorite. An average price for the seed is about \$5 per bushel. There is about the same difference between the hay and the straw that there is between wheat hay and wheat straw. To rid a field of a stand of alfalfa requires a strong plow and a strong team, but when it is plowed and cross plowed, planted to corn, and thoroughly cultivated for a season, the field will be clear of alfalfa. The pasture is profitable and satisfactory for horses and sheep, and hogs do remarkably well on it during the spring, summer and fall months. To pasture hogs to the best advantage, there should be several inclosures, in which the grass is kept young and tender by cutting for hay and irrigating. With such an arrangement, so that the hogs can be changed from one lot to the other, the fields will be kept in good condition, and ten to twelve head of shoats should be carried through the spring and summer months for every acre of good alfalfa. While they will not be fat for the butcher, they will be in good growing condition. During the spring months, cattle and sheep are liable to bloat, and as it is better to prevent the trouble than to try to cure it, we keep the stock off during wet weather and when the dew is on. Experience has taught us to salt our stock liberally while pastured on young alfalfa, and we find that sheep and cattle do better at all times of the year when some rough, dry feed can be had in connection with the green; hay or barley straw, placed in mangers so that they can have free access to it, may save the life of many a good animal. I would also recommend that where the acreage is small no stock be allowed to pasture on the alfalfa at any season of the year; instead, mow the alfalfa every day and haul it to the stock in some less valuable field—some old, worn-out pasture or timber lot. Horses, cows, sheep and hogs will all take kindly to it and thrive upon it, and the cutting can be made first in the spring when the plant is only six inches high. During wet weather it would be better to feed it in shallow mangers, but in dry weather it could be scattered on the ground. Give them all they will eat up clean, do not waste it, and the stock will do well, with no loss from bloat; and a twenty-acre field managed in this way will carry double the number of stock that could be pastured. A farmer should take some interest and pride in doing this cutting, laying off a strip each day sufficient to feed his stock, and he will find that in a very few days he can go over the same ground again, continue this treatment from early spring until the frosty weather sets in, and obtain some hay besides.

TRACK AND FARM.

Preventing Gambling Hurts the Thoroughbred.

The trotting-horse men of the State of New York are not nearly so much exercised over the anti-gambling amendment of the State Constitution as are those who run thoroughbreds, says Macon in the *Philadelphia Times*. There are a hundred men who own speedy trotters to one owning a runner. This is because the trotter is the most useful animal. The thoroughbred is valuable only for the racing and breeding purposes. Very few thoroughbreds are used as saddle horses, and still fewer are broken to harness. The trotting man doesn't bet so heavily on his pets, either. Contests of speed at country fairs and agricultural meetings often engage the very best of trotters. The kings of the running turf are seldom engaged in any meetings of the kind. The trotting man, therefore, feels that he is likely to benefit more by the new order of things than his confrere of the running turf, and he seems disposed to let the latter bear the brunt of getting any relief possible from the incoming Legislature. He was pretty generally ignored when the negotiations for the Ives pool law were in progress, and now he is possessing his soul in patience. He feels certain that he won't get the worst of it in any event.

How to Make Trotters Faster.

Since the pneumatic tire has done so much for trotting speed the racing thought seems to turn to increasing speed in the track rather than in the horse. W. B. Fasig, the retiring vice-president of the New York Driving Club, has a new idea about track preparation, which, if accepted, he believes will enable Alix to trot very close to 2:00 next season. Mr. Fasig was for many years secretary of the Cleveland Driving Park, where Maud S. made her still unbeaten record of 2.03½ to a high wheel sulky on a regulation track, and he is an expert in the business of putting trotting tracks on the edge for record-breaking. His idea is that a track should

first be made elastic and firm by sprinkling. When it had dried out just right on the surface he would harrow a pathway for the queen of the turf as close to the pole as possible, making the surface loose enough to the depth of half an inch, so that it would take away the sting to the feet which comes from a too hard track, and then with a narrow roller he would make a hard, smooth path for each of the sulky wheels, thus getting the least amount of friction on the ground. Mr. Fasig estimates that this special preparation for both horse and sulky would make a difference of one or two seconds in the record of Alix, and he says the little mare can surely trot in 2:02 under favorable conditions without this aid.

Monroe Salisbury has a like idea. The track is to be wet down at least twelve hours before the trial. By this time, Mr. Salisbury argues, the top of the track will be firm and the water will act as a cushion. With a combination of the Fasig and Salisbury ideas Alix will be the two-minute trotter.

Horse Notes.

When Harry Livesey of Rotherfield, England, was in New York last month as sole judge of hackneys at the National Horse Show, he made the acquaintance of the trotting horse, and expressed great admiration for the distinctly American type. Alix, in particular, he pronounced to be an almost perfect specimen of horseflesh, and manifested much interest in the queen of the trotting turf. At the Tattersalls sale, which followed the show, there were three mysterious purchasers "for an English gentleman," who proves to have been Livesey, and three American trotting mares are now on their way to his famous Trull's Hatch Stud, in Sussex, where they will breed to one of Livesey's prize-winning hackney stallions with a view to establishing a new type of road horses.

"Ringing" has become a great evil in Missouri, and a bill will be introduced in the Legislature at its present session making it a penal offense to enter a horse in a race to which he is not eligible or under an assumed name, says the *Kansas City Times*. This bill is substantially the Indiana law, with a few changes in verbiage, which has been approved by the American Trotting Association.

Summing up true economy in carrying colts through the winter consists not in stinting or starving them, but in feeding them bone and muscle-forming grain in such shape as to insure its perfect mastication and assimilation. Of whatever food a colt eats, so much is first taken for the work of maintenance—of maintaining his body; the rest, if any is left, goes to form more bone and muscle, to give him more strength and courage, and to make him superior to his fellows not so well fed. By far the major portion of his ration is used up in the work of maintenance, but the profit is derived from the added amount which promotes his growth. Hence, to stint the colt's feed is to voluntarily cut off profit. Bad treatment never made a good horse. If a colt is worth keeping at all, he is worth keeping well.

It is said that more mares will be bred this coming season than were bred either last spring or the previous one, which is undoubtedly due principally to the reduction that has taken place in service fees, says the *Horse World*. When the services of a highly-bred stallion of good individuality and demonstrated race-horse qualities can be secured for a fee ranging from \$25 to \$50 any owner of a good mare can raise a colt that can be disposed of at a price that will yield a fair profit on the cost of raising and developing it. The prices of light-harness horses seem to have reached a basis now upon which each person identified with the young horse during his breeding, growth and development may be assured of a fair profit for the time and money spent in preparing him for the field he is eventually destined to fill.

Elephants are extremely afraid of horses, writes Major John Butler in "Travels in Assam." To that fact he owed the deliverance of his wife and child from a terrible death. With them he was traversing the jungle over an exceedingly rough road, through forest and grass jungle alternately. The way had to be cut as they advanced. I was in the lead on a large elephant in my whodah, with a good battery of guns, when about midday I heard behind me a general cry of alarm, and hastily rode to the scene of danger. It seems that just after I had passed, with the coolies who had cut down the jungles, a huge Mukna elephant rushed from the jungle in a terrible rage and pursued the little baggage elephant, which was just behind my wife and child. The little elephant screeched and fled for its life straight ahead. Fortunately a pony was led beside the palkee which contained my wife and child. The wild elephant was close upon them, and they closed their eyes in horror, expecting to be dragged from their places and trampled to death. At that moment the great beast caught sight of the pony. It stopped short, turned aside, and fled back to the jungle as if pursued by an evil spirit. The men were filled with astonishment. Most of them had fled to the protection of the trees, leaving my wife and child alone.

THE HOME CIRCLE.

Words.

One day a harsh word rashly said,
Upon an evil journey sped,
And like a sharp and cruel dart,
It pierced a fond and loving heart:
It turned a friend into a foe,
And everywhere brought pain and woe.

A kind word followed it one day,
Flew swiftly on its blessed way:
It healed the wound, it soothed the pain,
And friends of old were friends again:
It made the hate and anger cease,
And everywhere brought joy and peace.

But yet the harsh word left a trace
The kind word could not quite efface;
And though the heart its love regained,
It bore a scar that long remained:
Friends could forgive but not forget,
Nor lose the sense of keen regret.

Oh, if we could but learn to know
How swift and sure one word can go!
How would we weigh with utmost care
Each thought before it sought the air,
And only speak the words that move
Like white-winged messengers of love.

—Sunday-school Times.

Do All That You Can.

"I cannot do much," said a little star,
"To make this dark world bright:
My silvery beams cannot pierce far
Into the gloom of night:
Yet I am a part of God's great plan
And so I will do the best that I can."

"What can be the use," said a fleecy cloud,
"Of these few drops that I hold?
They will hardly bend the lily proud,
If caught in her chalice of gold:
But I, too, am part of God's great plan,
So my treasures I'll give as well as I can."

A child went merrily forth to play,
"But a thought, like a silver thread,
Kept winding in and out all day
Through the happy golden head
Mother said: 'Darling, do all that you can,
For you are a part of God's great plan.'"

She knew no more than the twinkling star,
Or the cloud with its rain-cupful,
How, why, or for what all strange things
Are.

She was only a child at school,
But she thought: "'Tis part of God's great plan
That even I should do all that I can."

So she helped another child along
When the way was rough to his feet,
And she sang from her heart a little song
That we all thought wondrous sweet:
And her father—a weary, toil-worn man—
Said: "I, too, will do the best that I can."
—Margaret E. Sangster.

A Confidence.

"Oh, the bumblebee in the punkin blow,
Punkin blow—bumblybee, tam-te-de."

"Clarisse, what are you singing?
What is the rest of it?"

Clarisse laughed aloud. "There isn't any rest to it or for me either. I heard a little child singing that as we came out through the streets, and it's been haunting me ever since. I think a touch of premature summer weather goes to my head like champagne. I can't be very serious on a day like this."

Louise, for this was the name of the other speaker, twitched with a little discontented move the bow at her throat. "I hate such uncertain weather myself," she said; "one never knows what to wear. Here I am with a spring gown on and winter furs."

"I don't think this uncertain," Clarisse returned. "When it rains one moment and the sun shines the next, I call that a day which doesn't know its own mind, and I have the same contempt for its *morale* as for a vaseillating mortal."

"Do you always know your own mind?" asked Louise, lifting a pair of large mournful eyes.

"Of course. For instance, I knew your spring gown was lovely the moment I saw you this afternoon. I like those ribbon bands so much."

Louise turned the same doleful glance upon her costume.

"Do you? I thought I looked like a peppermint stick when I saw myself in the glass. There's just another instance of my miserable indecision of character. I hesitated for days over those ribbon bands for fear I shouldn't like them, and now they are irretrievable. I hate them."

"What is the matter, dear?" said Clarisse, with compassion and comparative irrelevance.

As answer two large tears rolled

down the cheeks of Louise. "Oh, Clarisse!" she sobbed, "they are turning back, and they'll find me crying."

The two girls were sitting side by side on a rustic bench under a gnarled old oak tree whose soft spring leaves seemed to deny the rude strength of the twisted boughs. It was one of the quietest corners of a park which had not been despoiled of its natural beauty. Where hills rose and rolled they still found lovely wild ravines between and sharp steep. Though the land was clear shaven about the rustic bench, the rising slope behind was crowned by a tangled brake, a trysting-place for noisy birds and squirrels. A beaten park road, already white and dry, as if summer had indeed come, swept past the bench; and rounding the curve of the hill some distance beyond, was lost to view.

Just at this vanishing point two men were standing, half turning in the road, as if to retrace their steps to the bench. Clarisse, darting a look at them, rose quickly to her feet, waving her two hands dismissively.

"Go on," she called, her hands hollowed about her mouth. "Finish your walk and come back for us; we want to rest here."

The men seemed to hesitate and consult together.

"But they have invited us for a walk," said Louise. "They will think this so odd."

"It's their own fault. They walked on talking together and quite forgot us."

"We left them first to gather wild flowers."

"Well, if you want to be caught crying—"

"Oh, no, no; send them away, Clarisse."

Clarisse advanced into the center of the road, her lifted hand imperiously pointing over the hills. The fresh spring breeze carried to her the sound of the two men's laughter as they turned obediently away with exaggerated courtesy of sweeping hats. Until the little hills screened them, they kept looking back over their shoulders. Clarisse watched their departure smiling. The smile was yet on her lips as she turned back to Louise.

"Well, dear," she said, mischievously, "what is it?"

And Louise, her eyes still on the road where the two figures had been, cried with misery too deep for blushes, "Oh, Clarisse, I can't decide which of them I love."

"What!" Clarisse sat very upright on the bench.

"You can't be more disgusted with me than I am with myself. I told you I had no decision in me. Until this winter I always thought it would be Laurence in the end, and I'm afraid he had some little reason to agree with me, but now—"

Clarisse waited. No more came. "Now is it to be Richard Manter?" she asked at length.

"I don't know. Do you think it should end so?"

"That depends," said Clarisse slowly, "on the beginning. To tell the truth, I have always agreed with you in thinking that Laurence would be your end. But of course if you find that you honestly love another man—and he loves you—"

The last words were not exactly a question, yet they had the inflection of interrogation. Louise so accepted them.

"Yes, he loves me. Sometimes I almost wish he didn't, for then I could have settled down quietly with Laurence and not be racked as I am now. Clarisse, if you had to choose between them, which would you choose?"

Clarisse shook her head. "I shall never be so embarrassed. This is an unequal world. If I can be sure of one good man's love I shall thank heaven fasting, and here are you with the love of two so equally good that you can't choose between them. Which is the most eloquent in pleading his cause, Louise?"

"I think," said Louise, reflectively, "that Mr. Manter is."

"Dick Manter! If you can say that,

you must be in love with him. "Why, he stammers horribly whenever he is at all excited. If he didn't stammer when he told you he loved you, Louise, I should question his sincerity. Did he?"

"How can you be so trifling, Clarisse? Mr. Manter has never said he loved me. I suppose he will do all that is proper, including stammering, when the time comes. I like his little stammer. It sounds so eager."

Clarisse sat looking at her friend with wide eyes and parted lips. "Louise!" she exclaimed, "do you mean that you are sitting here on this bench quietly disposing of a man who hasn't even stammered love to you?"

"That's just what he has done in everything but words. He's not like Laurence. I think that's his charm to me. For years Laurence has never been alone with me for a moment without saying a downright 'I love you.' It's almost gross. Mr. Manter doesn't need to do that."

"I'm afraid," said Clarisse, dryly, "that I like grossness in such matters. It saves trouble. For instance, you might be thinking it was yourself Mr. Manter cared for when it really was some one else. Your pretty sister Rose, for example, or it might even be I."

Louise turned swiftly. "Rose!" she cried.

"It strikes me," said Clarisse, laughing, "that you dismiss with a most unflattering ease of mind the possibility of Mr. Manter's nursing a secret passion in my direction. Now, I think of it, I believe his manner to me has been rather devoted of late. My question is: Is Mr. Manter attentive to me for your sake, or to you for my sake, or to both of us for Rose's sake. I'm sure to an impartial observer it might seem any of the three."

"You are talking nonsense, Louise, and you know it. He likes Rose well enough, but—oh, I know he doesn't love her."

"Then if you know, that ends speculation. It seems a reasonable conclusion to me, for, while I also like Rose well enough, it's you I love, Louise."

She held out her hand affectionately to Louise, who caught and pressed it between hers.

"Now, Rose is disposed of, what of me?" asked Clarisse, merrily.

Louise laughed with her. "You! How could it be you and I not know it?"

"I don't quite see myself," said Clarisse, candidly. "I was only trying to prove to you that you ought to be careful. Men do sometimes confuse matters by paying more attention to those near the rose than to the rose herself. It's often hard, particularly with a shy man, to distinguish between a vicarious affection and the real passion. All things considered, I must confess again that I prefer what you call grossness in these affairs. I suppose I shall shock you horribly, Louise, but I carry my preference so far that I really wouldn't trust any man on earth, not even Dick Manter, except tied with the string of clearly spoken words. But of course if you can understand Mr. Manter fully without speech—"

Louise interrupted impatiently. "Oh, a girl always understands if she chooses to. When I hear them declare they were 'so surprised,' I never believe a word of it. No, the only thing that troubles me is having no answer ready. Mr. Manter is not like Laurence. It will have to be yes or no with him, and I can't decide."

Clarisse drew her hand from her friend's clinging grasp, and deliberately opened her pocket-book, from which she selected a small coin.

"Do you see this?" she said, holding up the silver between her thumb and forefinger. Her lips were twitching with a smile. "This is my luck penny, a silver three-penny piece. Now, do you pray that it may be your luck penny. Heads, Dick—tails, Laurence."

Louise caught the lifted hand, her face glowing. "Clarisse, how can you? When I asked you to help me decide, I never thought you could do anything so—so—"

"Vulgar," supplied Clarisse. "Flipping for a husband doesn't sound particularly delicate, I'll admit. But I have a good motive back of it. I can't advise you, dear; you ought to know I can't, and if you will just trust me a little, this won't be indelicate, and it will help you. Now, come. I promise you that when it's over you'll say that it was the most delicate policy. Will you try?" She held up the coin and smiled winningly. "Trust me!" she repeated.

With Louise's "yes," the coin snapped by Clarisse's thumb-nail rose in the air and fell upon her knee. Louise bent forward, half unwilling, half eager; but Clarisse had her hand pressed tightly over the bit of silver, hiding it.

"Wait one moment," she said; "we must fully realize the solemnity of the moment. If you expect this chance as final it has ceased to be skirmishing for you, Louise, as it means a close engagement. Tails will give you Laurence; heads, Dick. I choose it so because I really think Dick has the better head of the two, inside. On the other hand, Laurence's head is of infinitely better finish outside. Dick's hair is red, and he hasn't a Roman nose. Comparing further, Laurence's temper is the sweetest in the world, but Dick's is more scintillating. I should say Laurence would be the easier to live with, but then think of dying with Dick! There seems hardly a pin to choose between them, except in one point; that's in Dick's favor. He has known you but one year, and Laurence is an old, old tale of devotion. Which do you think this coin is, Louise, heads or tails?"

"Oh, let me see it, Clarisse."

"Do you mean to abide by it?"

"I—I think I do."

Clarisse raised her hand and peeped under it. "Heads!" she cried, sweeping the coin into her palm. "Poor Laurence!"

Louise, with an involuntary gesture, lifted her finger to her lower lip, pressing it between her teeth. Clarisse looked up quickly.

"It's to be Dick," she said, briskly, snapping the clasp of her purse on the coin. "Now, that's decided, and you can be at peace, Louise, unless you'd like to 'flip' once more. Some people prefer to take the best two out of three."

Louise's finger dropped from her lip, which curved instantly into a smile. "I would feel it surer," she said.

"Would you?" answered Clarisse. She thrust her pocket-book deep into her pocket as she spoke, and settled herself judiciously upon the bench. "Louise," she said, severely, "look me in the face. I forgot to mention to you that people only prefer the best two flips out of three when the first flip does not suit them at all. Now answer me one question. Why did you suffer a distinct shock, and show it plainly, when Dick was suddenly decided upon?"

"It wasn't that exactly," began Louise.

"Then of what were you thinking that made your face fall inches as I called heads?"

"I was only thinking," faltered Louise, "that I could never break it to

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•DR•

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Laurence, and that if I felt it so for him, perhaps—"

"Perhaps what?"

"That I loved him best after all."

"Clarisse bent toward her friend affectionately, almost gratefully, grasping her two hands. "Of course you love Laurence best after all, and before all, too. I knew you did. One can't always decide what one wants, but you can find out what you don't want every time by simply 'flipping.' Don't you see my delicate policy now, Louise? If the wrong man came I knew you'd feel disappointed, and so you did. But are you perfectly convinced, dear? It is really and with no mistake to be Laurence in the end?"

Louise was gazing down the road toward the hill behind which the two figures had disappeared. "It couldn't ever have been any one else," she said, absently. "I know now it was to be Laurence from the beginning."

Clarisse lowered her eyes. "Louise," she said, softly, "as you are so sure, I must confess a little fib to you. That coin really fell tails, for Laurence, but I had to say it was heads to convince you that you didn't want Dick. Will you forgive me?"

Louise did not answer. Following her absorbed gaze, Clarisse also looked down the road to discover why. Two figures were approaching them from about the base of the green hill.

"Louise," Clarisse whispered, "what a funny world this is! Here comes the man you threw for and thought you lost, and found you must have, and the man— Oh, dear me, I have so much to confess to you! You can't guess what I've been going through this half hour, dear. Since yesterday I've been engaged to Dick myself—and he stammered horribly."—Margaret Sutton Buscoe in Harper's Bazar.

The University Wants California Books.

TO THE EDITOR:—The important collection of the writings of California authors gathered by the San Francisco Women's Literary Exhibit Committee for the Chicago Exposition has been presented to the library of the University at Berkeley. It is to be preserved, together with similar material already in the library, as a permanent exhibit of California literature.

It will be the aim of the library to render the collection as complete as possible, and to this end the active co-operation of all California authors is earnestly solicited.

Critics and reviewers into whose hands come such books and pamphlets—many of them privately printed or issued in small editions—can render valuable service to future students of our local literature by sending them to the University library for careful preservation. J. C. ROWELL, Librarian.

Berkeley, Jan. 16, 1895.

Smiles.

Much charity that begins at home is too feeble to get out of doors.—Texas Sittings.

"That's a good idea. Carry it out," said the editor to the man who came in with a better plan for running the paper.—Philadelphia Record.

Jinks—"There is one drawback to these self-made men that they usually overlook." Filkins—"What is it?" Jinks—"They're seldom able to select their materials."—Puck.

Scientist (at railroad restaurant)—"Do you know, sir, that rapid eating is slow suicide?" Drummer—"It may be; but on this road slow eating is starvation."—New York Weekly.

"When a man has attained the wisdom of years," asked the youth, "he loses his foolish belief in omens, does he not?" "He loses," said the sage, "his belief in the good ones."—Indianapolis Journal.

He—"I wonder when you will be able to set as good a table as your father does?" She—"By the time you are able to provide as good a table as your father does, my dear."—Burlington (Iowa) Gazette.

Children's Hour.

Between the dark and the daylight,
When the night is beginning to lower,
Comes a pause in the day's occupations
That is known as the children's hour.

I hear in the chamber above me
The patter of little feet;
The sound of a door that is opened,
And voices soft and sweet.

A whisper and then a silence,
Yet I know by their merry eyes
They are plotting and planning together
To take me by surprise.

A sudden rush from the stairway,
A sudden raid from the hall,
By three doors left unguarded
They enter my castle wall.

They climb up into my turret,
O'er the arms and back of my chair;
If I try to escape, they surround me—
They seem to be everywhere.

They almost devour me with kisses,
Their arms about me entwine,
Till I think of the bishop of Bingen
In his mouse tower on the Rhine.

Do you think, oh, blue-eyed banditti,
Because you have scaled the wall,
Such an old mustache as I am
Is not enough for you all?

I have you fast in my fortress
And will not let you depart,
But put you down in the dungeon
In the round tower of my heart.

And there I will keep you forever,
Yes, forever and a day,
Till the walls shall crumble to ruin
And molder in dust away.

—Longfellow.

Bound to Have His Walk.

Jack is a handsome Newfoundland dog. Every evening at nine o'clock he is taken for a walk by his master, who has an orangewood walking-stick which he particularly likes and usually carries. Every evening at the stroke of nine, Jack rushes to the hatrack in the hall, noses about among the walking-sticks and umbrellas until he finds the orangewood stick, and immediately afterward appears before his master, carrying it in his teeth. He wags his tail, and prances delightedly about, and shows as plainly as possible that he will be a broken-hearted dog if his friend and master omits the usual evening stroll.

One evening the family were in the sitting-room with some guests. A shower had come on, and it was raining hard when the clock struck nine. The strokes had hardly died away, when Jack danced gayly into the room with the orangewood stick in his mouth. "No, Jack," said his master, "we cannot go to-night. It is raining too hard. We should get wet. Just listen to it, Jack!" With that the host turned his attention once more to his guests and presently they heard Jack pulling over the things in the hatrack. They supposed he was putting away the walking-stick, like the clever dog that he is.

A few moments later a beseeching little bark was heard. There at the sitting-room door stood Jack, with an umbrella in his mouth. Every one flew for the waterproof and hat of the man of the house, and that gentleman, bearing the umbrella so persuasively offered him, took Jack out for his walk without further delay. —Harper's Young People.

Gems.

The first virtue is to restrain the tongue.

He approaches nearest to the gods who knows how to be silent, even though he is in the right.—Cato.

A pair of bright eyes with a dozen glances suffice to subdue a man; to enslave him, and inflame; to make him even forget; they dazzle him so that the past becomes straightway dim to him; and he so prizes them that he would give all his life to possess them. What is the fond love of dearest friends compared to his treasure?—Thackeray.

A vulgar man is captious and jealous; eager and impetuous about trifles. He suspects himself to be slighted, thinks everything that is said meant at him; if the company happens to laugh he is persuaded they laugh at him; he grows angry and testy, says something very impertinent; and draws himself into a scrape by showing what he calls a proper spirit and asserting himself.—Lord Chesterfield.

Sympathy, what is that? A sigh that flutters on the lips of the tender girl and dies in the whisper of the breeze. Individuals may know of sympathy, but when a people's aggregate sentiments become collected in the crucible of policy, sympathy vanishes in the air like the diamond when burned, and nothing then remains but an empty crucible surrounded with the ashes of gross egotism.—Kossuth.

Alas! how few of nature's faces there are to gladden us with their beauty! The cares, and sorrows, and hungerings of the world change them as they change hearts; and it is only when those passions sleep, and have lost their hold forever, that the countenances of the dead, even in that fixed and rigid state, to subside into the long-forgotten expression of sleepless infancy, and settle into the very look of early life; so calm, so peaceful, do they grow again, that those who knew them in their happy childhood kneel by the coffin's side in awe, and see the angel even upon earth.—Dickens.

How the Mind is Affected by the Weather.

The psychology of the weather is suggested by Dr. T. D. Crothers as a promising subject for study. He says: "Very few persons recognize the sources of error that come directly from atmospheric conditions on experimenters and observers and others. In my own case I have been amazed at the faulty deductions and misconceptions which were made in damp, foggy weather, or on days in which the air was charged with electricity and thunder storms were impending. What seemed clear to me at these times appeared later to be filled with error. An actuary in a large insurance company is obliged to stop work at such times, finding that he makes so many mistakes which he is only conscious of later that his work is useless. In a large factory from ten to twenty per cent less work is brought out on damp days and days of threatening storm.

The superintendent, in receiving orders to be delivered at a certain time, takes this factor into calculation. There is a theory among many persons in the fire insurance business that in states of depressing atmosphere greater carelessness exists and more fires follow. Engineers of railway locomotives have some curious theories of trouble, accidents and increased dangers in such periods, attributing them to the machinery." Dr. Crothers adds that the conviction prevails among many active brain workers in his circle that some very powerful forces coming from what is popularly called the weather, control the work and the success of each one.

DOMESTIC ECONOMY.

A Good Cup of Coffee.

If there is one daily comfort more soothing than all others, it is to be greeted at the breakfast table with a steaming cupful of good coffee these cold winter mornings. Now mind you, I say good coffee. Not the lifeless, insipid, sloppy liquid that often goes by that name, but coffee possessing that distinctive, delicious coffee flavor, which once enjoyed makes the consumer discontent ever after with anything else.

Now such coffee can be had in only one way—to use home-roasted and freshly-roasted coffee. The factory-roasted coffee so extensively used by housekeepers is wholly devoid of that fine flavor. This loss may be due to staleness, for there is no telling how long the coffee has been roasted, perhaps months; or it may be that the strength is extracted in the process of roasting for making coffee extract. Anyway, the fine flavor is gone, and the liquid made from it stands in the same relation to the home-roasted article as the warm, flat-tasting water of a shallow pool to the cold, crystal nectar of a mountain spring.

The fact that roasted coffee is offered at as cheap a price, and sometimes even cheaper, than the green coffee, is very conclusive that there is some deteriorating mystery in connection with the roasting.

It is rather an exacting task to roast coffee perfectly, but experience soon masters the work. I know of no article that requires a more particular temperature of the oven. If too low, the coffee will dry up and the flavor be spoiled; if too hot, it will burn quickly and roast unevenly. It requires very frequently stirring. When I roast coffee, I take a seat by the oven door, with spoon in hand, and remain at my post until the coffee is done. I roast enough at one time to fill a quart jar. The instant it comes from the oven it is put into a quart glass jar and sealed tightly. It is more convenient, of course, to use the market-roasted coffee. It is always ready for use without the labor of roasting it. But that convenience does not pay for what is lost in quality.

To clean wall paper, wipe from the top toward the bottom, in strokes about half a yard long, with the crumb side of a loaf a week old cut in two.

IF in grocery stores, in cooking schools, or by peddlers in your kitchen, other baking powders are recommended or urged upon you in place of the Royal, reject them. It is unsafe to substitute any baking powder in place of the old standby, the thoroughly tried Royal. The official reports show that all others are cheaper made powders of inferior strength, and contain lime, alum or sulphuric acid.

Bells.

Bell making is one of the great industries in this country, yet how seldom we hear of it. Foreign countries recognize that our bells are superior in tone to any other make, and even the Japanese are sending orders to this country for bells. The Japanese have long been regarded as famous bell makers, but they do not hesitate to apply to American manufacturers when they find it to their advantage to do so. There is grim humor in the fact that the fire-alarm bells to be used in Tokio have been ordered of a manufacturing firm in Jersey City.

The largest bell in America is in the cathedral of Montreal, and it weighs 28,000 pounds. The bell in the public building at Philadelphia is to weigh between 20,000 and 25,000 pounds. There is a bell at Erfurt, Germany, cast in 1479, and one in Notre Dame, Paris, cast in 1860, each weighing 30,000 pounds. The great Chinese bell at Pekin weighs 120,000 pounds, is 14 feet high and 12 feet in diameter. By the way, the Chinese used to make their bells nearly square in shape. The largest bell is, of course, that in the Kremlin at Moscow. It is over 19 feet in height and measures nearly 23 feet across the mouth. Its thickness at the point where the clapper would strike is 23 inches; the cost of manufacturing this work of art was about \$300,000.

Highest Bridge in the World.

The highest bridge of any kind in the world is said to be the Leo river viaduct on the Antofagasta Railway, in Bolivia, South America. The place where this highest railway structure has been erected is over the Melo rapids, in the Upper Andes, and is between the two sides of a canyon which is situated 10,000 feet from the level of the Pacific. Counting from the surface of the stream to the level of the rails this celebrated bridge is exactly 636½ feet in height. The length of the principal span is eighty feet, and the distance between abutments (total length of bridge) is 802 feet. The largest column is 314 feet 2 inches long, and the batter of the pier what is known to bridge builders as "one in three." The gauge of the road is two feet six inches, and trains cross the bridge at a speed of thirty miles an hour.

Cost of Railroad Cars.

An ordinary flatcar costs to build about \$380; a flat bottom coal car costs \$475; a gondola drop bottom coal car, \$525; a double bottom hopper coke car, \$400; a box car, \$600; a stock car, \$550; a ventilated fruit car, \$700; a refrigerator car, \$800; a four-wheeled caboose, \$550, and an eight-wheeled caboose, \$700; a fifty-foot mail and baggage car, \$3500; a second-class passenger coach, \$4800; a first-class coach, \$5500, and a first-class Pullman car costs \$15,000.

If Congressman Livingston can secure enough votes there will be no more "waste of powder" for informing people in the neighborhood of the various posts of the Army that "the sun has risen," or "it's sundown." He objected to a clause in the Army Appropriation bill a few days ago providing for "\$20,000 for firing the morning and evening gun at military posts" as an unnecessary waste of powder. "My question is," he said, "What is the practicability of it? What is the advantage of it either to the country or to the Army? If the Lord says when the sun shall go down, I want to know how much advantage this gun is to the country?"

THE meter is 39.375+ inches, the decimeter 3.9375, the centimeter .39375 and the millimeter .039375 of an inch. A fair approximation can be had by calling the millimeter .04 or $\frac{1}{25}$ of an inch and the centimeter .4 of an inch, and by having some number to use as a comparator we get a better idea of the actual sizes, for five millimeters mean very little to us unless we think that it is about $\frac{1}{4}$ of an inch.

Seeds, Plants, Etc.

Walnut Trees.

The most complete collection of Walnuts to be found anywhere: 23 varieties, including the Mayette or Grenoble, Franquette, Parisienne, Chaberte, and Vourey, the leading market walnuts of France, all first grade, second generation seedling trees, the only class of seedlings worth planting, of all the above named varieties, besides Propartulens and Cluser. Also grafted trees.

NEW VARIETIES OF PRUNES.

"Clairac Mammoth" D'Ente!

OR IMPROVED FRENCH PRUNE.

The finest and largest prune ever introduced into this State, grading (cured) from 30 to 35 per pound; splendid to ship East as a plum. This season is the first one that this remarkable prune has been put on the market.

Everything else in the nut and fruit tree line. General Catalogue, with essay on Grafting the Walnut, and how to redeem by grafting large, unproductive and defective walnut trees, with cuts, 10 cts. per copy.

Supplement, with Price List for the season of 1894-95, sent free on application. This supplement contains a full description of the "Clairac Mammoth."

FELIX GILLET,

Barren Hill Nursery. Nevada City, Cal.

Mammoth
New Violet
1895
Floral Wonder.



The California.

Immense in size; stem 12 inches long.

Intensely fragrant; color Pure Violet Purple.

A STERLING NOVELTY.

It has captured the San Francisco market.

Last year a few thousand flowers were offered in San Francisco, and they were sold for TEN TIMES THE PRICE of Marie Louise and Russian.

Plant vigorous and absolutely free from disease. Does not fade out. Last season several hundred flowers were picked from a single plant.

Price of Plants on Application.

Descriptive Catalogue of Seeds, Plants and Fruit Trees mailed free.

COX SEED AND PLANT CO.

411-415 SANSOME STREET,
SAN FRANCISCO. CALIFORNIA.

PACIFIC NURSERY.

Office and Greenhouses:
Cor. Baker and Lombard Sts., San Francisco.
Nursery at Millbrae, San Mateo Co.

GROWN WITHOUT IRRIGATION.
Prune du Myrobolan, French, German, Bulgarian, Robe de Sargent, Clyman, Tragedy, Fellenburg, St. Catherine's, \$8 and \$10 per 100
Apples, leading sorts, \$8 and \$10 per 100
Apricots, the best varieties, \$10 per 100
Almonds, the best soft-shell sorts, \$8 and \$12 per 100
Cherries, an Mazzard, \$10 and \$12 per 100
Peaches, best free and cling varieties, \$8 and \$10 per 100
Pears, Bartlett and other sorts, \$10 and \$12 per 100
Roses, two-year-old, field grown, newest and best old varieties, 20c each, \$18 per 100
Monterey Cypress, Blue and Red Gum, in boxes, transplanted, \$1.25 per 100, \$10 to \$12.50 per 1000
Palm California, Japan, and Australian Fan Palm, Phoenix (Date Palm), Dracenas, and a large assortment of evergreen trees, deciduous trees and shrubbery. Azaleas Indica and Mollis, Camellias, Rhododendron, Fuchsias, at low prices. F. LUDEMANN.

SANTA ROSA NURSERIES.



Large Stock of Unirrigated Trees on whole Seedling Roots, warranted free from scale and root knot. Prices low.

Cherries, Grapes, Nut and Shade Trees very low. All leading varieties.

Also, WONDERFUL TENNANT PRUNE; Normand, Abundance, Willard and Simon Plums; Bungoume Japan Apricots, Early Bearing Apples, and Earliest Yellow Peaches.

New Price List Free.

R. W. BELL,



SANTA ROSA, CAL.

400,000 Fruit Trees

—OF—

Sacramento River Nursery Co.,

For sale at Cut Prices. No better trees in California. Terms and discounts satisfactory. Address OSCAR KNOTT, Walnut Grove, Or. A. R. HARVIE, Sileton.

PLUMS!

"Plums—tell your people to grow the best plums: they will always find a good market."

So said several of the largest handlers of fruits in Chicago when the question was asked them recently, "What is the most profitable fruit to plant now?"

Clyman. Burbank. Mikado. Normand. Satsuma. Tragedy. Kelsey. Diamond. Grand Duke. Simon. Ickworth. Pond.

These are the best. Write for prices, which will be made very low.

Also, almost everything else in the Fruit and Nut Tree line. Seeds, Bulbs, Plants, etc.

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ESTABLISHED 1876.

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No Irrigation.

Growers of all the Leading Varieties of Fruit Trees.

Correspondence solicited.

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Alameda County, Cal.

James A. Anderson, NURSEYMAN,

Lodi, San Joaquin County, Cal.

Has a Choice Stock of YEARLING NURSERY TREES for this season's planting. Guaranteed free from disease and insect pests, and at prices to suit the times.

Blenheim, Royal and French Apricots. Hungarian, Tragedy and French Prunes. Burbank, Satsuma and Kelsey Plums. Ne Plus Ultra, La Prima, Texas Prolific, I. X. L., Nonpareil and Languedoc Almonds. Salway, Crawford, Muir and twenty other varieties of Peaches.

Also Nectarines, Apples, Pears, Cherries, Figs, Oranges, Lemons, etc.

Your prices are mine. Don't forget to write for particulars. Correspondence solicited and cheerfully answered. Address all communications,

J. A. ANDERSON, Lodi, Cal.

E. J. Bowen, SEED MERCHANT.

Alfalfa, Grass, Clover, Vegetable and Flower Seeds.—Onion Sets.

Largest Stock and Most Complete Assortment.

Send for large illustrated descriptive and priced Catalogue, mailed free.

New crop Salt Lake Alfalfa. Inquire for samples and prices.

Address—

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Or 214 Commercial St., Seattle, Wash.

100,000

Olive Trees,

Mission and Nevadillo,

Three-Year-Old Stock,

4 to 6 Feet and 6 to 8 Feet High.

BOTTOM PRICES.

JOHN E. PACKARD,

Pomona, California.

Olive Trees for Sale

GEO. H. KUNZ, Sacramento.

Mission, 3 years. 5 to 6 feet.
Mission, 2 years. 3 to 4 feet.
Manzanillo, 2 years. 2 to 3 feet.
Nevadillo, 2 and 3 years. 4 to 6 feet.
Picholine, 2 years. 2 to 3 feet.

Olive Trees.

ALL KINDS OF NURSERY STOCK. Send for our Book on Olive Culture.

Howland Bros.,
POMONA, CAL.

Olive Trees

IN VARIETY.

For prices and a pamphlet on Olive Culture, address

JOHN S. CALKINS,

Pomona, Los Angeles Co., Cal.

Orange Trees.

Budded trees of the leading varieties, one and two-year buds, also seedling trees from one to four years old—all good, thrifty stock, free from scale.

Also, a general variety of

Nursery Stock and Trees.

Prices to suit the times.

OROVILLE CITRUS ASSOCIATION,

OROVILLE, BUTTE COUNTY, CAL.

FOR SALE!

50,000

French and Robe de Sargent

PRUNE TREES,

AT 6 CTS. EACH, OR \$50 PER THOUSAND.

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Doubtful Seeds alone. The best are easy to get, and cost no more. Ask your dealer for

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Always the best. Known everywhere. Ferry's Seed Annual for 1895 tells you what, how, and when to plant. Sent Free. Get it. Address D. M. FERRY & CO., Detroit, Mich.

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Prices to Meet the Times.

Before purchasing elsewhere write—

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FRUIT TREES.

FRENCH PRUNE, BARTLETT PEARS.

Apple, Peach, Cherry, Apricot and Almond TREES.

First-Class Trees at very low prices.

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TREES A FINE ASSORTMENT.

—AND—
PLANTS best varieties, free from pests of any kind. Prunus Simoni, Bug, Rostraver and Murdoch Cherries; Black California Figs; Rice Soft Shell and other Almonds; American Sweet Chestnuts; Propartulens Walnuts. Hardy mountain grown Orange Trees. Our oranges have stood 22 degrees this winter without injury. Dollar Strawberry, the best berry for home use or market. Address C. M. SILVA & SON, Lincoln, Placer County, California.

BLUE GUMS!

Monterey Cypress!

IN LOTS TO SUIT.

Write for Prices.

Delivered on wharf in San Francisco.

Address W. A. T. STRATTON,

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Cheap Fruit Trees!

APPLE SEEDLINGS, home grown, transplanting sizes, Nos. 2 and 3.

Also large stock of FRENCH PRUNES. Write for prices.

ROBERT P. EACHUS,

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KANSAS SEED HOUSE.

EVERYTHING IN THE SEED LINE.

Our Specialties: Seed Corn, Tree Seeds, Onion Seeds and Sets, Alfalfa, Sacaline, Lathyrus, Silvestris, Sandvetches, Spurry, Kaffir, and Jerusalem Corn, and other new forage plants for dry and arid countries. NEW CATALOGUE MAILED FREE ON APPLICATION.

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Once planted, stands forever.
 Roots penetrate deep into the soil.
 Needs no cultivation, no manuring.
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 Water will not drown it. Fire will not kill it.
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SACALINE is not for KITCHEN use but for the COWS

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PLANTS	
One.....	\$ 0 25
Six.....	1 25
Twelve.....	2 25
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SEEDS	
Our stock of Sacaline seed is limited, but we will book orders at the following rates until stock is exhausted. 1 pound of seed contains about 100,000 seeds.	
Packet.....	\$0 15
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Orders booked now, for delivery after February 1st. 1895, at the above prices.

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Grows in poorest soils.
 Cattle cannot destroy it
 Affords shade to cattle in Summer.
 Is a protection against storms in Winter.
 Gives three and four cuttings per year.
 Produces 90 to 180 tons of green forage per acre.
 Stems and leaves, green or dry, greatly relished by cattle.

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DECIDUOUS FRUIT TREES

OUR SPECIALTY.

The most Complete Assortment of General Nursery Stock grown on the Pacific Coast.

1,000,000 Trees for the Season of 1894-95 in Stock.

Acknowledged everywhere to be equal to the best. Guaranteed to be healthy and free from scale or other pests.

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FANCHER CREEK NURSERY,

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Offers a Full and Complete Assortment of

★ **FRUIT TREES,** ★
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GOOD, THRIFTY STOCK, FREE FROM ROOT KNOT AND INSECT PESTS.

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Write for prices on large and small orders. ACAMPO, CAL.

ORANGE TREES at Rock Bottom Prices.

To close out a special lot of three-year buds of Med. Sweets (five-year roots), finely branched, 4x6 feet, we offer them at \$25 the hundred.
 Write us if you want Med. Sweets or Wash. Navels; we can give you lower prices for good trees than any one.

Cal. Fan and Cham. Excelsa Palms, Laurustinus, Dracaena Indivisa, Roses, Tuberoses, Etc., Etc.

Agents wanted in every town in Northern and Central California where we are not represented.

ALOAHA ORANGE NURSERIES,

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Fruit Trees, Nut Trees, Small Fruits, Ornamental Trees and Shrubs, Palms, Flowering Plants, Etc.

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Write us for new Catalogues and Estimates. Prices to suit the times.

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ALL KINDS OF FRUIT TREES.

DECIDUOUS, ORNAMENTAL AND SHADE TREES, SMALL FRUITS, ETC.

The only nursery offering the true and genuine Loganberry, one of the finest berries ever produced None can equal it. First introduced and offered for sale at this nursery

Send for catalogue, colored plate and circular.

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Stockton Nursery.

Get our Catalogue and Prices before purchasing your Trees or Anything in the Nursery Line.

Clean, Thrifty, Healthy Stock at Prices to Suit the Times.

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THOS. MEHERIN,
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FRUIT TREES.

Large and Complete Stock of Fruit and Ornamental Trees and Plants, at prices to suit the times

SEEDS!

GRASS, CLOVER, VEGETABLE, FLOWER AND TREE SEEDS, ETC.
 Catalogue mailed free on application. Please mention this paper.

THOS. MEHERIN, 516 Battery Street (P. O. Box 2059), San Francisco, Cal.



FINE SMALL FRUITS a specialty.

CUTHBERT RASPBERRY.

Best Market Berry known: large, firm and luscious, stands travel finely, bears immensely, and has two crops a year; 50 cents per dozen; \$3 per 100. Also Strawberries, Blackberries, Gooseberries, Currants, etc., of the finest imported varieties. Prices on application. L. U. McCANN, Santa Cruz, Cal.

THE FINEST STOCK OF
Citrus and Deciduous Trees,
BERRIES AND OTHER PLANTS,
 In the State, at the Home Nurseries, Pasadena, Cal.

One and two-year-old Orange and Lemon Trees, the finest and thickest stock ever grown anywhere, and all the best varieties, also Pomelo (Grape Fruit), and the Japanese Red Dancy Tangerine Orange; also the best deciduous trees. Raspberries, Blackberries and the Wonderful Everbearing and other fine varieties of Strawberry. Nothing but the best of all varieties of Fruits and Nuts. Don't fail to write for prices to

HEWITT & CORSON, Pro'ps, Pasadena, Cal.

ACRE APPLES, \$1,493 Write NURSERIES AND ORCHARDS, Louisiana, Mo. for free sample copy telling about it. A practical Fruit and Farm paper, published by Stark Bros. 40c a year; circulation, 400,000 copies. The "Cream of the Cream"—gives the busy Fruit Grower or Farmer, who hasn't the time or the money to buy and read a great mass of papers, what is best from them all, what he wants to know.



THE most successful farmers and gardeners buy their seed directly from the growers; for this reason we raise largely the most risky kinds, especially Cabbage and Onion Seed. This latter is extra fine this season. No catalogue contains more varieties of vegetable seed, and none more of the new that are really good—see outside cover for an illustrated selection from our new specialties, which we will sell at half rates. Catalogue free.
J. J. H. GREGORY & SON, Seed Growers,
 MARBLEHEAD, MASS.

Coast Industrial Notes.

Southern California is now daily producing over seventeen hundred barrels of petroleum.

The city of San Diego has offered \$800,000 for the plant of the San Diego Water Company. The offer has been declined.

The Gila dam and reservoir, the "Wolfey ditch," in Arizona, has been bought by Charles Crowley of Los Angeles for \$500,000.

Water from the Bull Run river was turned into the mains of Portland, Or., last week. The water is brought nearly forty miles from the Bull Run river, a mountain stream rising in the Cascades near Mount Hood. The plant cost the city over \$2,000,000.

At the recent sale of the Hudson Bay Company in London the highest price brought was 35s a seal skin the average was 30s. There is a blue lot of sealing men in Alaska. The news was a complete surprise, for never have skins sold so low in the history of the Bering sea industry.

The Sierra Valleys Railway Company has incorporated to construct and operate railroads in Washoe county, Nev., and in the counties of Sierra, Lassen and Plumas, Cal. The estimated length of the road is 100 miles. The directors are J. M. Platt, J. Elder, J. Flittie, F. F. Ryer and W. S. Kittle. Capital stock \$1,500,000.

Captain J. A. Mellon is having two boats built here which he will take by rail to Green River, Wyo., in April, and assisted by river men, will descend the Colorado river to Yuma and the Gulf of California. Captain Mellon has been running steamers on the Colorado river thirty-two years. He is a resident of Yuma, Ariz., and proposes to make the trip of 3000 miles in seventeen days.

Charles England, of Kelso, Wash., who is running a logging camp near Olegua, has a long chute, just one mile long, and when a log is placed in it at the top of the mountain, it reaches the bottom, plunging into the Olegua creek, in just fourteen seconds. The chute is a perfect one, as there never has been a case where one jumped the chute. The water at the mouth of the chute is of sufficient depth that the logs are not injured in striking the bottom of the stream.

D. Freeman, president of the Los Angeles Chamber of Commerce, the past year writes: "We are still suffering from underproduction in the very necessities of life. When it takes a train of cars nearly a mile long to bring into this State the eggs that the enterprising hens of Kansas and Iowa lay for us, and when we import annually over 4,000 carloads of bacon, poultry, dried fruits and other products, to the value of \$8,000,000, that could be raised here, let no one croak about overdoing things in this country."

In Orange Co. the Union Oil Company has begun sinking wells five miles north of Fullerton and adjoining the Puente wells on the west. The company has over eleven hundred acres of land east of the Puente wells, which it purchased from the Stearns Ranches Company, a year ago. The Puente Oil Company is securing the right-of-way for its pipe line to Fullerton, and it is the intention of the Santa Fe Company to make this town the oiling station for their engines, as that is the only point on their line that oil can be piped to.

The Snoqualmie Falls Electric Power Co., State of Washington, has acquired 350 acres of land on both sides of the Snoqualmie river, and an option on as much more land adjoining. The theoretical energy of the falls is 51,607-horse power. The plans of the company are to develop and deliver by electrical transmission, power for factories, lighting, heating, etc. A contract has been arranged with the Union Electric Company of Seattle to have the company furnish them with its power entirely; the price charged per horse power being \$30. The capital stock is 20,000 shares of \$100.

The new Sierra Valley railroad, which has been completed for a distance of twenty-three miles and is projected to cross the Sierras through Beckwith Pass, has been mortgaged to the Southern Pacific. Nevada papers think that the fact that the Southern Pacific is aiding the project indicates that corporation has secured control of the property, with the probable intention of abandoning the Central Pacific line across the Heuness Pass route during the winter season, thus avoiding blockades and the heavy cost of maintaining the long line of sheds across the snow belt on that route.

Nearly 100 new buildings are to be built this year at the Presidio, to be occupied as barracks, built of brick and stone and inclosed by a stone wall. They represent an aggregate cost of about \$300,000. Seven brick stables, costing about \$110,000, will also be built. An administration building, to cost \$50,000, and forty brick and stone buildings, to cost in the aggregate \$200,000, a stone wall to include a large part of the reservation, the improvement of the grounds and other minor changes, aggregate up to \$1,000,000 in total. The contract for one barrack building, to cost \$40,000 has been awarded. The second building is to be finished by next July. The department is now receiving bids for the stone wall and will soon receive bids for the work of filling in the parade ground, macadamizing etc.

The rivers of the Pacific coast formerly contained no shad, but in 1875 the fish commission carried a quantity of shad fry across the country and placed them in the Columbia and other rivers. The fish propagated to such an extent that in 1892 the number of shad caught on the coast of California was 525,424, and 212,350 more was taken in the Columbia river. The total catch of shad for 1892 on the Pacific coast was in excess of the number caught off Connecticut, Rhode Island and Massachusetts, and it nearly equaled the

catch of South Carolina. Though the total catch of shad on the Pacific coast is at present very small in comparison with that of the Atlantic seaboard, their rapid multiplication since they were placed in the rivers of California, Oregon and Washington renders it not unlikely that in the near future they may be more plentiful on the Pacific than on the Atlantic coast. This is one of the most interesting results so far recorded of the work of the government fish commission.

STATE OF OHIO, CITY OF TOLEDO, Lucas County.
FRANK J. CHENEY makes oath that he is the senior partner of the firm of F. J. CHENEY & Co., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of HALL'S CATARRH CURE.

Sworn to before me and subscribed in my presence this 6th day of December, A. D. 1890.

(SEAL) A. W. GLEASON, Notary Public.

Hall's Catarrh Cure is taken internally and acts directly upon the blood and mucous surfaces of the system. Send for test monials, free.

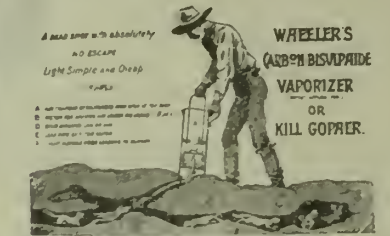
F. J. CHENEY & CO., Toledo, O.
Sold by Druggists, 75c.

There are over a thousand laborers working with scrapers and shovels on the Yaqui canal, Sonora, Mexico, besides those employed on the dredge. The canal is expected to be finished by April, and the dam will be constructed in May.

A COUGH SHOULD NOT BE NEGLECTED. "Brown's Bronchial Troches" are a simple remedy and give immediate and sure relief.

We desire to call the attention of our readers to the advertisement of H. B. Rusler, "The Comet Force and Spraying Pump," which appears in another column of this paper. Spraying has become an absolute necessity, and no farmer should be without one, especially when they can be purchased at so low a price.

5/A HORSE BLANKETS
ARE THE STRONGEST.
Made in 250 Styles.
For either road or stable use.
All shapes, sizes and qualities.
WM. AYRES & SONS, PHILADELPHIA.



Destroy the Gophers!
You may now grow alfalfa on the uplands and save garden, trees and flowers.
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Rheumatism, Sprains, Swellings, All Aches,
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Sciatica, Burns, Headache, Cuts, Hurts,
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We manufacture the celebrated Aspinwall Potato Planter, Aspinwall Potato Cutter, Aspinwall Paris Green Sprinkler, etc. Every machine warranted. These machines greatly reduce the cost of raising potatoes. Send for Free Illustrated Catalogue.
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Store Your Grain Where Your Best
Interests Will Always be Consulted.

WAREHOUSES AND WHARF
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Capacity of Warehouse, 50,000 tons; wharf accommodations for the largest vessels afloat.

Grain received on storage for shipment, and for sale on consignment.

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Protect Your Trees
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Gilman's Patent Tule Tree Protector.
PATENTED AUGUST 1, 1893.

FIRST PRIZE—Medal and Diploma—California Mid-Winter International Exposition.
Cheapest, best and only one to protect trees and vines from frost, sunburn, rabbits, squirrels, borers and other tree pests.
For testimonials from parties who are using them, send for descriptive circulars.

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Sole Manufacturer of Patent Tule Covers.
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FRANCIS SMITH & CO.,
—MANUFACTURERS OF—

SHEET IRON & STEEL PIPE

FOR TOWN WATER WORKS.
Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes.

130 BEALE STREET, SAN FRANCISCO, CAL.
Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.

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OF CALIFORNIA.
SAN FRANCISCO, CAL.
INCORPORATED..... APRIL 1874



Capital Paid Up.....\$1,000,000
Reserve Fund and Undivided Profits, 130,000
Dividends Paid to Stockholders.....\$32,000
—OFFICERS—
A. D. LOGAN.....President.
I. C. STEEL.....Vice-President.
ALBERT MONTPELLIER.....Cashier and Manager.
FRANK McMULLEN.....Secretary.
General Banking, Deposits Received, Gold and Silver, Bills of Exchange Bought and Sold. Loans on Wheat and Country Produce a Specialty.
January 1, 1894. A. MONTPELLIER, Manager.

Price's Traction Engine.



We have one of these engines that was used about one month last season and was taken back by us by reason of illness of purchaser. Engine is in perfect order, and in better working order than when first sent from the factory. A BARGAIN. Indicated power, 80-horse; Cylinders, 8x8, Wheels, 8 ft. high, 28 in. wide; weight, less than 10 tons. Price when new, \$4500.

HOOKER & CO.,
16 and 18 Drumm Street, San Francisco.

METAL WHEELS for your WAGONS.

Any size you want, 20 to 66 in. high. Tires 1 to 8 in wide—hubs to fit any axle. Haves 1/2 inch many times in a season to have set of low wheels to fit your wagon for hauling grain, fodder, manure, boxes, &c. No resetting of tires. Call free. Address
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FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, and the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils.

A Department of Electrical Engineering
Has been established under a thoroughly qualified instructor. The course is thoroughly practical. Send for Circular. C. S. HALEY, Sec.



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Open All Year : A. VAN DER NAILLEN, Pres't.
Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. Established 1864. Send for Circular.

S. F. MARKET REPORT.

Market Review.

SAN FRANCISCO, Jan. 23, 1895.

FLOUR—We quote: Net cash prices for Family Extras, \$3 40@3 50; Bakers' Extras, \$3 30@3 40; Superfine, \$2 25@2 35 bbl.

WHEAT—The market does not have promising appearance and sellers are at a disadvantage. Foreign centers are reported as being of easy character, and local exporters do not feel encouraged to do much in the way of prompt shipping. At the moment \$3 1/2 c. is a full quotation for standard shipping wheat, while something extra would probably bring 85c. In milling grades there is no heavy business just at present, though sales are being made within a range of 87 1/2@92 1/2 c. Offerings of Walla Walla Wheat are fairly liberal, being quotable at 75@77 1/2 c. for fair average quality, 85c for bluestem and 70@72 1/2 c. for damp.

BARLEY—Sample business is of very moderate proportions, while prices remain steady, without being buoyant. Considerable Barley is said to be stored in warehouse against Call Board contracts, so that spot offerings of domestic product are not of large magnitude. At the same time there is good supply of both Oregon and Washington Barley. The weather is becoming a rather more important factor in the situation. Incessant rain has operated against planting, and farmers in some sections are likely to become nervous about the new crop, unless there soon be a cessation of the storm which is generally prevailing. We quote: Feed, fair to good, 75@80c; choice, 81 1/2@84c; Brewing, 85@92 1/2 c. c. t. l.

OATS—Receipts are falling off, but this circumstance has not affected values. There are offerings large enough to meet all reasonable demands, and until stocks are materially lowered it is not likely that prices will show any great change for the better. We quote as follows: Milling, \$1 12 1/2@1 15; fancy feed, 97 1/2@1 02 1/2; good to choice, 90@95c; poor to fair, 80@87 1/2; Black, \$1 15@1 30; Red, \$1 05@1 17 1/2; Gray, 92 1/2@97 1/2 c. c. t. l.

CORN—Offerings of large Yellow are none too large under existing conditions, and prices have rather steady tone. Other kinds also have improving tendency. We quote: Large Yellow, \$1 20@1 25; small Yellow, \$1 22 1/2@1 27 1/2; White, \$1 22 1/2@1 27 1/2 c. c. t. l.

CRACKED CORN—Quotable at \$27@27 50 per ton.

CORNMEAL—Millers quote feed at \$26 to \$26 50 per ton; fine kinds for the table in large and small packages, 36@37 c. lb.

OILCAKE MEAL—Quotable at \$30 per ton from the mill.

FEED—Manhattan Horse Food (Red Ball) 100-lb. bags, \$11 50; Manhattan Egg Food, 100-lb. bags, \$11 50.

COTTONSEED OILCAKE—Quotable at \$26@27 per ton.

SEEDS—A shipment of 80,000 lbs. Mustard went to New York on the last Panama steamer. We quote as follows: Mustard, Brown, \$1 75@2; Yellow, \$2 40@2 50; Tiesie, \$2 30@2 35; Canary, 30@40c; Hemp, 30@40c; Rape, 12@12 1/2; Timothy, 5 1/2@6 1/2; Alfalfa, 7 1/2@7 3/4 c. lb.; Flax, \$2 25@2 50 c. lb.

MIDDLINGS—Quotable at \$17 50@19 per ton.

MILLSTUFFS—We quote: Rye Flour, 3 1/2 c.; Rye Meal, 3c; Graham Flour, 3c; Oatmeal, 4 1/2@5c; Oat Groats, 5c; Cracked Wheat, 3 1/2 c.; Buckwheat Flour, 5c; Pearl Barley, 4 1/2@4 3/4 c. lb.

BRAN—Quotable at \$12@13 50 per ton.

HAY—The rain stops business. Daily receipts are quite light. Wire-bound Hay sells at \$1 per ton less than rope-bound Hay. Following are the wholesale city prices for rope-bound Hay: Wheat, \$8@11 50; Wheat and Oat, \$8 50@11; Oat, \$10@11; Alfalfa, \$8@9; Barley, \$8 50@10; Clover, \$8 50@10 50; compressed, \$8 50@11; Stock, \$8@7.

STRAW—Quotable at 70@80c per bale.

HOPS—Quiet and unchanged. Quotable at 4@8c per lb.

RYE—Quotable at 87 1/2@92 1/2 c. o. t. l.

BUCKWHEAT—No market. Prices nominal. Quotable at 85@95c per o. t. l.

GROUND BARLEY—Quotable at \$18@18 50 per ton.

POTATOES—Domestic arrivals are light, on account of rain. Over 4000 sks received from Oregon yesterday. We quote: Volunteer New Potatoes, 1 1/2@2 c. lb.; Early Rose, 25@45c; River Reds, 30@35c; Burbanks, 30@50c; Oregon Burbanks, 50@55c; Salinas Burbanks, 75c@81; Sweeties, \$1@1 25 for Rivers and \$1 50@2 c. t. l. for choice stock.

ONIONS—Light receipts cause higher prices. Quotable at 50@55c per c. t. l.

DRIED PEAS—We quote: Green, \$1 25@1 50; Niles, \$1 15@1 25 per c. t. l.

BEANS—Trade not brisk. Prices keep fairly steady. We quote: Bayos, \$1 75@1 90; Butter, \$1 75@1 80 for small and \$1 55@1 90 for large; Pink, \$1 10@1 35; Red, \$1 60@1 65; Lima, \$1 10@1 45; Pea, \$2 25@2 50; Small White, \$2 25@2 55; Large White, \$2 10@2 30; Blackeye, \$2 75@3; Red Kidney, \$2 75@3; Horse, \$1 60@1 70 per c. t. l.

VEGETABLES—Business is light and slow, as arrivals are small. Only five boxes of Asparagus came in yesterday morning with five sacks of Green Peas. We quote: Asparagus, 15@20c per lb.; Mushrooms, 6@10c per lb. for common and 12 1/2@20c for good to choice; Los Angeles Tomatoes, 75c@1 25 per box; String Beans, 12 1/2@15c per lb.; Green Peas, 8@10c per lb.; Marrowfat Squash, 35@7c per ton; Hubbard Squash, \$10 per ton; Turnips, 50c per c. t. l.; Beets, 60@75c per sack; Carrots, 30@50c; Cabbage, 30@40c per c. t. l.; Garlic, 3@4c per lb.; Cauliflower, 30@40c per dozen; Dry Peppers, 15@17 1/2 c. lb.; Dry Okra, 12 1/2@15c per lb.

FRESH FRUIT—Receipts of Apples come along with freedom, and dealers have large stocks from which to make selection. Trade, however, is very quiet. We quote: Persimmons, 30@50c per box; Apples, 30c@1 10 per box; Pears, 25@75c per box.

CITRUS FRUIT—Mexican Limes are a little firmer in price. We quote: Mandarin Oranges, \$1 50@2 per box; California Navels, \$1 75@2 75; Seedlings, \$1@1 50 per box; Sonora Oranges, \$1 50@1 75 per box; Mexican Limes, \$4 50@5 per box; California Limes, in small boxes, 50@75c per box; Lemons, Sicily, \$4@5; California Lemons, \$1 50@2 for common and \$2 50@3 for good to choice; Bananas, \$1@2 per bunch; Pineapples \$3@5 per dozen.

DRIED FRUIT—The filling of a few orders gives a little activity to the market. Peaches are in light stock, with more or less demand. Apricots are dull and neglected. Pears and sun-dried Apples are meeting with some inquiry. The crop of Prunes for 1894 is estimated at between 35,000,000 and 37,000,000 lbs.

Following are the prices furnished by the Fruit Exchange. The figures presented represent carload lots, small parcels occasionally selling at slightly lower rates:

Apricots—Fancy Moorpark, 8 1/2 c.; choice, do. 8c; fancy, 7 1/2 c.; choice, 7c; standard, 6 1/2 c.; prime, 6c. Apples—Evaporated, 5 1/2@7c; sun-dried, 4@5c. Peaches—Fancy, 6 1/2 c.; choice, 6c; standard, 5 1/2 c.; prime, 5 1/4 c.; peeled, in boxes, 12@13c.

Pears—Fancy, halves, 5 1/2 c.; quarters, 4 1/2 c.; choice, 4 1/4 c.; standard, 3 1/2 c.; prime, 3c. Plums—Pitted, 4@5c; unpitted, 1 1/2@2c. Prunes—Four sizes, 4 1/2@4 3/4 c. Nectarines—Fancy, 7c; choice, 6 1/2 c.; standard, 6c; prime, 5 1/2 c. Figs—White, choice, 5@5 1/2 c.; Black, choice, 1 1/2@2c.

Raisins—In sacks (50-lb. boxes selling at 1 1/2 c. lb. higher): 4-crown, loose, 1c per lb. in 5-lb. boxes: 3-crown, 2 1/2 c.; 2-crown, 2c; seedless Sultanias, 3c; seedless Muscatels, 2c per lb.; 3-crown London Layers, \$1 25 per box in 20-lb. boxes; clusters, \$1 50; Dehesa clusters, \$2; Imperial clusters, \$3; 4-crown, loose, \$1 15; 4-crown, loose, faced, \$1 25 per box. Dried Grapes—1 1/2 c. per lb.

NUTS—Trade remains of jobbing character. We quote: Chestnuts, 9@11c; Walnuts, 5@7c for hard shell, 8@9c for soft shell and 8@9c for paper shell; California Almonds, 7@7 1/2 c. for soft shell, 4 1/2@5c for hard shell and 8@8 1/2 c. for paper shell; Peanuts, 4 1/2@6c; Hickory Nuts, 5@6c; Filberts, 8 1/2@9c; Pecans, 6c for rough and 8c for polished; Brazil Nuts, 7@7 1/2 c. per lb.; Cocoanuts, \$1@5 per 100.

HONEY—Receipts are small, while the demand is light, and values show no particular firmness. We quote: Comb, 10@11 1/2 c.; water white extracted, 7@7 1/2 c.; light amber extracted, 5 1/2@6c; dark amber, 5@5 1/2 c. per lb.

BEEWAX—Quotable at 24@26c per lb.

BUTTER—Strictly choice creamery is rather steady at the moment, receipts from shipping points having been quite light for the past few days. Other kinds are in ample supply for all demands. We quote: Fancy creamery, 22@24c; fancy dairy, 17@18c; good to choice, 15@16c; fair, 13@14c; store lots, 10@12c; pickled roll, 13 1/2@15c; firkin, 14@15c per lb.

CHEESE—Custom continues of regular character at steady prices. We quote: Choice to fancy, 8@10c; fair to good, 6@7c; Eastern, ordinary to fine, 11@14c per lb.

EGGS—The market is in unsettled condition. Fair weather would almost surely bring in liberal consignments, causing prices to weaken, while a continuance of the present rain would likely have the opposite effect. We quote: California Ranch, 24@30c, with occasional sales of fancy at a small advance; store lots, 22@25c; Eastern Eggs, 21@22c per dozen for cold storage and 23@25c for fresh.

POULTRY—Prices show steadier tone, receipts not being large. One or two carloads of Eastern poultry are due, but washouts may detain their arrival. We quote as follows: Live Turkeys—Gohlbers, 9@10c; Hens, 9@10c per lb.; dressed Turkeys, 10@13c per lb.; Roosters, \$4@4 50 for old, and \$5@5 50 for young; Broilers, \$3@4 for small and \$4@5 for large; Fryers, \$4@4 50; Hens, \$4 50@5 50; Ducks, \$5@6; Geese, \$1 50@2 per pair; Pigeons, \$1@1 50 for old and \$1 75@2 25 per dozen for young.

GAME—Better prices obtained yesterday. We quote: Robins, 50c; Quail, \$1 25; Canvasback, \$3@6; Mallard, \$4@4 50; Sprig, \$2 50@3; Teal, \$1 75@2; Widgeon, \$1 50@1 75; small Ducks, \$1; English Snipe, \$2 50@3; common Snipe, \$1 25@1 50; Brant, \$1 50; Gray Geese, \$2 50@3; White Geese, \$1 25@1 50; Rabbits, \$1 25@1 50; Hare \$1 per dozen.

PROVISIONS—Supplies liberal. Demand not active. We quote as follows: Eastern Sugar-cured Hams, 11c per lb.; California Hams, 10@10 1/2 c.; Bacon, Eastern, extra light, sugar-cured, 13c; medium, 8 1/2@9c; do, light, 9@10c; extra light, 11@12 1/2 c. per lb.; Pork, extra clear, bbls, \$19; half bbls, \$10; Pig Pork, bbls, \$21; hf bbls, \$11; Pigs feet, bf bbls, \$4 50; dry salted Pork, 8 1/2@9c per lb.; Beef, mess, bbls, \$7 50; do, extra mess, bbls, \$8 50; do, family, \$10; extra, do, \$10 50@11 per bbl; do, smoked, 9@10c; Pickled Tongues, hf bbls, \$7; Eastern Lard, compound, tierces, 6 1/2@8 1/2 c.; do, prime, steam, 8 1/2 c.; Eastern, pure, 10c pails, 9 1/2 c.; 5-lb pails, 9 1/2 c.; 3-lb pails, 9c; California, 10-lb tins, 7 1/2@8c; do, 5-lb, 8@8 1/2 c.; California pure, in tierces, 7 1/2@8c; do, compound, 6 1/2 c. for tierce.

WOOL—Movement continues slow, without any disturbance in values. Stocks are light, consisting almost entirely of fair kinds. The recent London Wool sales were well attended and liberal transactions were effected. Business opened slowly, but activity and strength were gained as the sales progressed. American buyers purchased with moderate freedom of stock suited to their requirements. We quote Fall:

Free Northern..... 7 @ 8 1/2 c.
Northern, defective..... 5 @ 7
Southern & San Joaquin, light and free..... 5 @ 6
Do, defective..... 3 @ 4

HIDES AND SKINS—Only select stock will bring full figures. Culls are slow of sale, most transactions being at inside figures. Quotable as follows:

	Sound.	Culls.
Heavy Steers, 54 lbs up, per lb.....	6 1/2 @ 7 c.	5 1/2 @ 6
Medium Steers, 45 to 56 lbs.....	5 1/2 @ 6	5 @ 6
Light, 42 to 47 pounds.....	4 @ 5	3 1/2 @ 4
Cows, over 50 lbs.....	4 @ 5	3 @ 4
Light Cows, 30 to 50 lbs.....	4 @ 5	3 @ 3 1/2
Stags.....	3 @ 4	2 @ 3
Kips, 17 to 30 lbs.....	4 1/2 @ 5	3 @ 3 1/2
Veal Skins, 10 to 17 lbs.....	5 1/2 @ 6	4 @ 4 1/2
Calf Skins, 5 to 10 lbs.....	7 @ 8	6 @ 7
Dry Hides, usual selection.....	9c.	
Dry Kips, 7@7 1/2 c.; Calf Skins, do, 12@13c; Cull Hides, Kip and Calf, 6@8c; Pelts, Shearings, 10@20c each; do, short, 25@30c each; do, medium, 30@40c each; do, long wool, 40@70c each; Deer Skins, summer, 25@30c; do, good medium, 15@22 1/2 c.; do, winter, 5c per lb; Goat Skins, 20@35c apiece for prime to perfect, 10@20c for damaged, and 5c each for Kids.		

MEAT MARKET.

Prices remain steady. Supplies are quite equal to all demands. Following are the rates for whole carcasses from slaughterers to dealers:

BEEF—First quality, 5@5 1/2 c.; second quality, 4 1/2 c.; third quality, 3 1/2@4c per lb.

CALVES—Quotable at 4 1/2@5 1/2 c. for large and 5 1/2@7 1/2 c. for small.

MUTTON—Quotable at 5@6c per lb.

LAMB—Yearlings, 6@7c per lb.

PORK—Live Hogs, on foot, grain fed, heavy and medium, 3 1/2 c.; small Hogs, 4c; dressed Hogs, 5 1/2@6 1/2 c. per lb.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING JAN. 8, 1895.

532,315.—CAR COUPLING—Downey & Hummer, Bishop, Cal.

532,334.—TROTTERS' STRETCHER—K. S. O'Keefe, S. F.

532,215.—LAMP HEATER—A. L. Robbins, Los Angeles, Cal.

532,116.—GRAVE IMPLEMENT—S. Todd, Alturas, Cal.

532,407.—NON-CONDUCTING COVERING—E. W. Tucker, S. F.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible by mail or telegraphic order. American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Fruit Exchange Bulletin.

Following is Bulletin No. 25 of the California Fruit Exchange in its full official form:

SAN FRANCISCO, Jan. 23, 1895.

Dried fruits to customers in Eastern markets may be quoted at the following rates f. o. b. California, subject to commission:

AS REPORTED BY SAN FRANCISCO HANDLERS. GRADING—SAN FRANCISCO STANDARD.

	Prime.	Standard.	Choice.	Fancy.
Apricots.....	5	6	6 1/2	8 to 8 1/2
Peaches.....	4 1/2	5 1/2	5 3/4	6 1/2 to 8
Pears.....	2	2 1/2	3 1/4 to 4	4 1/2 to 5 1/2
Prunes—Four sizes, 4 1/2 to 4 3/4.....	40-50, 9	50-60, 6 1/2		
100-120, 2 1/2; 120 and over, 1 1/2.				
Apples—San Francisco market, 5c.				

While the above are the only prices which we are able to quote from information here, it must be understood that they mean very little. In the first place the volume of actual business is not sufficient to base any quotations upon; and secondly, the confusion in grading is such that the terms used mean nothing. There are apricots in the market (a very few) that will bring 14 cents. The purchasing power at the East seems very small, and the trade has had exaggerated notions of stocks remaining in California. Since New Years there has been a decided increase in inquiry from the East, which indicates the approaching exhaustion of consigned stocks; and while the result of the inquiry has been very few actual shipments, it has created considerable interest in this market, where the trade has been picking up a good many lots, especially peaches, and swooping them about among themselves, evidently looking to an active movement in the near future.

The above being conditions as we learn them from the trade of this city, we add a letter, just received from Col. Hersey, which represents actual sales by the Santa Clara Exchanges. It indicates sales of small prunes at decidedly higher rates than the quotations given above:

"SAN JOSE, Jan. 22, 1895.

The market is more active on peaches, 'cots and small prunes. Standard peaches (Crawford), bright, 6 1/2 cents; choice, 7. 'Cots, 7 1/2 to 8 for choice; 5 1/2 to 6 1/2 for standard. Small prunes we have closed out at 2 cents for 120 and over (an advance of 1/2 cent); 100 to 120 at 2 1/2 cents. No movement in the four sizes. The above represents actual sales.

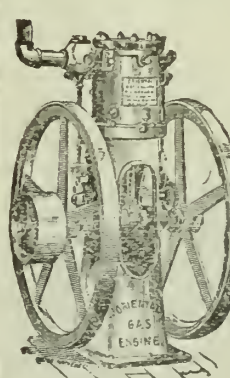
(Signed) PHILO HERSEY."

It is to be understood that the Santa Clara 'cots and peaches are graded to size and represent a class of goods which do not reach this market. The terms "choice," "standard," etc., do not mean the same thing in San Jose that they mean on the street in this city.

One result of the meeting of the late convention of Fruit Exchanges will be a clear understanding of the grading business after this year.

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The Oriental Launch is Perfection.

M. A. GRAHAM,

Inventor and Manufacturer,

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BOSTON..... LOS ANGELES

Largest Handlers of Dried Fruits.

If you have a parcel to offer, submit samples o

We are the principal handlers.

MOORE, FERGUSON & CO

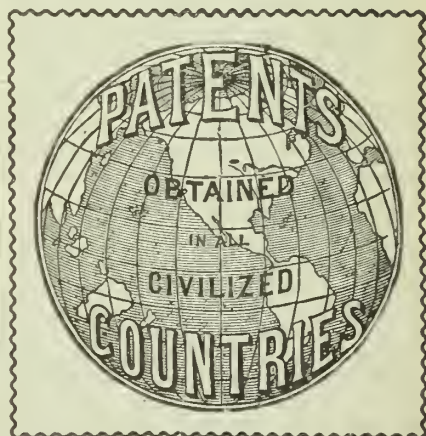
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Patrons of Husbandry.

A Dull Grange Week.

There have been no public developments in the grange field this past week. If there has been a meeting of the newly-chosen district deputies, no report of it has reached the Rural office; and, as a matter of fact, we think there has been no such meeting. Neither have we had any word from the committee deputed to arrange for grange correspondence. These movements do not, we fancy, need to be reminded that the sooner they get into working order, the better it will be for the order. The difficulty with the grange just now is, that it has nothing to offer in the way of new attractions—and that is wherein lies the opportunity for revival work. We shall watch eagerly and shall not fail to chronicle the first movements in the promised grange agitation.

Agricultural Experiment Stations.

Following is a report on Agricultural Experiment Stations made by Hon. Amos Adams of San Jose to the State Grange at its Stockton meeting, but through some accident omitted in the published official record:

Fourteen years ago, by invitation of President Reid of the University at Berkeley and Prof. Hilgard of the Agricultural College, the chairman of this committee, together with Bros. H. M. Larue, Thomas McConnell, I. C. Steele and Seneca Ewer, visited the University of California to consult with the officers thereof with a view of enlarging the sphere of usefulness of the then infantile experiment garden connected with the Agricultural College.

On reaching the University, we were taken in charge by President Reid, Prof. Hilgard, Secretary J. H. C. Bonte and our late Bro. Klee, gardener. After a thorough examination of the grounds set apart for experiment work, consisting of an arborium, grasses, fruits, flowers, shrubbery, etc., we returned to the lecture-room, where a free and full discussion was had in regard to the advisability and necessity of not only enlarging the present plant, but, owing to the great diversity of soil, climate, etc., of establishing other experiment stations in this State.

At the conclusion of this informal discussion, Amos Adams presented a resolution which was unanimously adopted, asking for an appropriation of \$15,000 to aid in enlarging the present agricultural experiment station, and to establish others in California.

Our efforts on this coast soon attracted the attention and hearty co-operation of that stalwart champion of farmers' interests, Representative Hatch of Missouri, since whom no more able or willing friend has the farmer ever had in the halls of Congress.

When the present Secretary of Agriculture omitted to provide by appropriation for the continuance of our experiment station, it was Representative Hatch who came to the rescue and had the usual appropriation inserted in the pending bill, thus saving our stations from ruin and decay, and at the present writing the California experiment stations rank among the leading ones in the United States. And yet they are not in this State of the magnitude and usefulness they will ultimately attain as their beneficial effects are more fully recognized by the farmer, for we are inclined to the opinion that there are a large number of farmers who are not fully aware that these stations are public institutions, supported by taxes, established primarily for the benefit of the working farmers who have not the facilities or time to make tests of soil or of plant life suitable to the infinite variety of soils and climates existing in California. These stations are doing an immense amount of good in experiments carried on by the latest and most improved

methods, solving for the farmer what he cannot do for himself, and the results of these experiments are free to all farmers in the State. Seeds, plants, cuttings, etc., are also free and are cheerfully given out by the foreman of each station to applicants; and if there is a farmer in the State who does not receive some benefit from them, it is caused by a failure to apply for information or for seed and plants they may have for distribution.

At present there are five agricultural experiment stations under the supervision of Prof. Hilgard and a corps of able assistants, composed of Prof. E. J. Wickson, Prof. E. L. Greene, and two assistants, Professors Loughridge and Woodworth, two instructors in chemistry, an assistant devoted to viticulture and olive culture, and an inspector, C. H. Shinn, of the four outlying stations, including the two forestry stations.

The duties of all of those named above, except those of the inspector, are confined to the central station at Berkeley, the most important station of all because of the better facilities at hand. There are from thirty-five to forty persons constantly employed at the central and outlying stations, and from \$20,000 to \$25,000 is received annually for their support.

The central or home station, located at Berkeley, occupies about twenty-five acres. Here are the nurseries, the orchards, the garden of economic plants, the wild garden and the propagating houses. Here also are plats of grasses, clovers and many other plats of plant life.

When the large propagating houses and conservatory, now in contemplation, are built, the list of plants will be greatly extended.

It is from the central station that all correspondence is conducted.

Persons can send samples of water there to be analyzed to ascertain if it is fit for domestic purposes or for irrigation. They can also send samples of soil to ascertain what crops can best be grown on it at most profit, and to learn how best to treat the soil to make it produce better crops. The value of this information cannot be overestimated by the farmers, as a correct knowledge of the soil he cultivates and the water used for irrigation often determines his success or failure through life.

Do the farmers of California generally avail themselves of the information given out so freely at the central station? If a farmer constantly has poor crops, he is either cultivating his land to crops unsuited, or irrigating them with water that is poisonous to plant life. These points he can be set right on by sending samples of soil and water to Prof. Hilgard. But before doing so send to the professor for directions of how to send, etc.

There are four other stations. One is located near Jackson, Amador Co., at an altitude of about 2000 feet above the ocean, too high for citrus but well adapted to hardy deciduous fruits.

The second of the outlying stations is situated near Tulare City, in the San Joaquin valley.

The third of these stations is located on some of the poorest land in San Luis Obispo county, about three miles east of Paso Robles, on the east side of the Salinas river.

The fourth is situated about equidistant from Chino, Pomona and Ontario, in the San Gabriel valley. Its specialty is the propagation of semi-tropical fruits and plants.

Then there are the two forestry stations, one at Santa Monica and the other near Chico, Butte Co.

By a special act of Congress still another station has been established, on Union island in the San Joaquin river. Its specialty is the cultivation of rice, the sugar cane and sugar beets on tide lands.

Prof. Wickson, under whose immediate supervision these tests are being conducted, informs us that the plants are all growing well, and the only question undetermined is whether the frosts will cut the sugar cane and rice off before maturity.

In conclusion, what more can your

committee add that will awaken the farmers of California to a greater appreciation of the advantages they may derive from our Experiment Stations, where experiments are constantly being made by experienced men, and successes and failures properly noted? For be it known that to the observant farmer the knowledge of the failure of fruits, cereals or vegetables on similar soil to his own is of far greater value to him than the knowledge of success.

It is time the average farmer should call a halt on the too common belief that the free use of muscle alone leads to success in farming, for in these later days science is coming to the aid of poor tired muscle and demands that the farmer should use more brains—more science and less muscle—if he expects to prosper in his calling, and no better way can be devised than to avail himself of the information freely given at the Agricultural Stations. Respectfully submitted, AMOS ADAMS, Chairman.

Sonoma Pomona Grange.

Petaluma, Jan. 21st.

The Pomona Grange of Sonoma county held its regular quarterly meeting in Petaluma Wednesday, and its members from all over the county were present in large numbers.

The meeting was called to order at 10 o'clock in the morning, and the election of officers was taken up, with the following result: S. T. Coulter of Santa Rosa, Master; J. M. Winans of Petaluma, Overseer; A. P. Martin of Two Rock, Lecturer; C. H. W. Bruning of Glen Ellen, Steward; Don Mills of Santa Rosa, Ass't Steward; Mrs. E. W. Davis of Santa Rosa, Chaplain; G. N. Whittaker of Bennett Valley, Treasurer; Rollin Andrews of Two Rock, Secretary; Miss Mamie Kelsey of Petaluma, Pomona; Mrs. David Walls of Petaluma, Flora; Mrs. A. P. Martin of Two Rock, Ceres; Mrs. Flora Andrews, Lady Ass't Steward; J. C. Purvine, Gatekeeper.

A resolution relating to the securing of dairying and farming legislation was passed and referred to the legislative committee of the State Grange in Sacramento. The meeting adjourned at 12:30 P. M., and all the grangers and a few invited guests took possession of the entertainment room of the Presbyterian Church, where the lady members had fairly outdone themselves in providing a tasty dinner of chicken pie, baked beans, salad and good things innumerable. Those lady grangers are not apprentices at making happy the inner man.

At 2 o'clock an open meeting was

held, when Past Master J. C. Purvine, assisted by M. D. Hopkins, installed the newly-elected officers. Don Mills, secretary of the State Grange, was present at both sessions.

The next quarterly meeting of Pomona Grange will be held at Two Rock on the third Wednesday in April.

GRANGER

From Selma.

SELMA, CAL., Jan. 21, 1895.

TO THE EDITOR:—The regular meeting of Selma Grange was held on Saturday, Jan. 19, 1895. The following officers were elected for the ensuing year: Master, Paris Allen; Overseer, S. B. Holton; Lecturer, Mrs. C. K. Roadhouse; Steward, Mrs. E. Holton; Assistant Steward, H. R. Shaw; Chaplain, C. C. Scott; Treasurer, J. J. Roadhouse; Secretary, T. B. Smith; Gatekeeper, D. N. Rankins; Pomona, Mrs. Allen; Flora, Miss Jessie Ross; Ceres, Miss Edith Scott; Lady Assistant Steward, Mrs. T. B. Smith. Regular time of meeting first and third Saturdays of each month, at 2 P. M. We hope that the future will be brighter. Two candidates for degrees were balloted for and elected. Initiation of officers will take place on February 2nd. T. B. SMITH, Sec'y.

CALIFORNIA

Pure Food Exposition.

MECHANICS' PAVILION,

January 28 to February 16, 1895.

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Concerts Afternoon and Evening.

Persons attending the Exposition will be able to secure excursion rates by rail.

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SEVERE

COUGH

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Spitting Blood

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AYER'S CHERRY PECTORAL

"Seven years ago, my wife had a severe attack of lung trouble which the physicians pronounced consumption. The cough was extremely distressing, especially at night, and was frequently attended with the spitting of blood. The doctors being unable to help her, I induced her to try Ayer's Cherry Pectoral, and was surprised at the great relief it gave. Before using one whole bottle, she was cured, so that now she is quite strong and healthy. That this medicine saved my wife's life, I have not the least doubt." K. MORRIS, Memphis, Tenn.

Ayer's Cherry Pectoral

Received Highest Awards
AT THE WORLD'S FAIR

Sacaline.

Sacaline was discovered by the Russian explorer, Maximowicz, in the Isle of Saghalin, situated in the Sea of Okhotsk, between Japan and Siberia. Although known for some years in the botanical gardens of the old world as a desirable ornamental foliage plant for lawns, etc., and to a limited extent in the Agricultural Experiment Stations of the United States, it is only recently that its great value as a drought-resisting forage plant has been discussed and finally recognized by the leading authorities of advanced agriculture.

It grows to the height of eight to twelve feet, with an abundance of large leaves eight to ten inches in length and half as broad, which are devoured with avidity by stock. Though it has the appearance of a shrub, its stem is herbaceous and its perennial root withstands the greatest drouth; and although the plant is liable to lose its top growth by severe frost, the roots will endure the hardest freezing. The young shoots are sometimes eaten like asparagus and the young leaves are boiled like spinach. As a forage plant, it has been proved that during the summer it will yield four cuttings, each three feet high, or at the rate of twenty-five tons per acre of green fodder at each cutting.

If seeds are used in planting sacaline they should be started as is usual with tomato or cabbage seed, and the plants set out three feet apart each way. Thus planted, the foliage should completely cover the ground when the plants are well established. The roots branch on all sides, and pass horizontally from the rhizomes, penetrating the hardest soils and giving origin to new shoots which further increase the size of the clump. The first cutting should be made when the stems are three to four and a half feet in height, and should be cut even with the ground. If the second growth is strong enough, a second cutting may be had; but when well established, three or four annual cuttings can be very safely made.

Caution.

Special attention is called to the advertisement, on another page, of Catton, Bell & Co., who are the sole Pacific coast agents for "Little's Chemical Fluid Sheep Dip." The reputation and sale of Little's Dip have reached such proportions that it is found necessary to caution those who want the genuine dip, from purchasing inferior imitations.

They are again compelled to warn sheepmen and the trade in general from purchasing cheap and worthless dips that are now sold in this market under the name of "Little's Australian Dip," and which is put up in square coal-oil cans and sold at prices ranging from 80 cents to 95 cents per gallon, as also against buying any dips that may be sold under the name of Little's that are not put up in the regulation iron drum.

The genuine "Little's Chemical Fluid Sheep Dip" is put up in round iron drums, painted red, and each drum bears an orange-colored label giving the trade mark of Little's Dip, and showing the signatures of the manufacturers, and also of Catton, Bell & Co. as sole agents. The dip is also put up in tins containing a large English gallon, packed ten cans to the case. The dip is sold by them to the trade by the English gallon only.

The imitation is also put up in small American gallon tins, without labels.

See that each drum and gallon can is labeled with "Little's Dip," without which none is genuine.

BACK FILES of the PACIFIC RURAL PRESS (unbound) can be had for \$2.50 per volume of six months. Per year (two volumes), \$4. Inserted in Dowsy's patent binder, 50 cents additional per volume.

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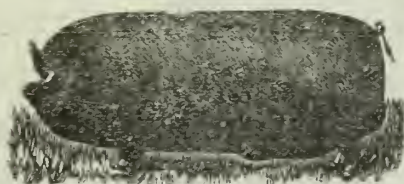
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BERKSHIRES.

We received many compliments for our herd from visitors at the State Fair. We competed for 13 ribbons and won 11, as follows: 2 special; 2 sweepstakes; 3 firsts; 4 seconds.

We have a few Choice Pigs for sale.

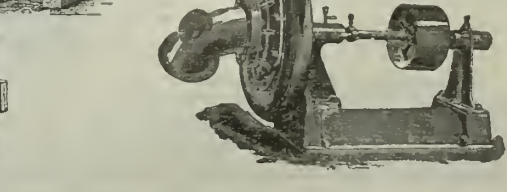
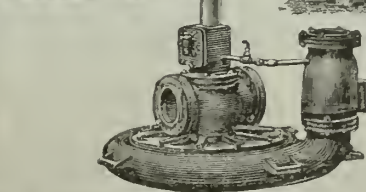
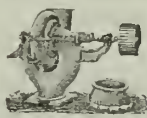
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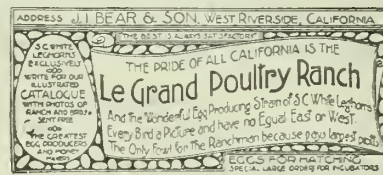
S. C. White Leghorns,

S. C. Brown Leghorns,

Barred Plymouth Rocks,

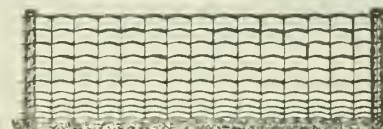
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Eggs, \$3 per 13. Send for Circular.



EGGS FOR HATCHING,

In large or small lots, from Barred Plymouth Rock, S. C. Brown Leghorn and Black Minorcas, at 50c per doz. MRS. J. G. FREDERICKS, Madison, Cal.



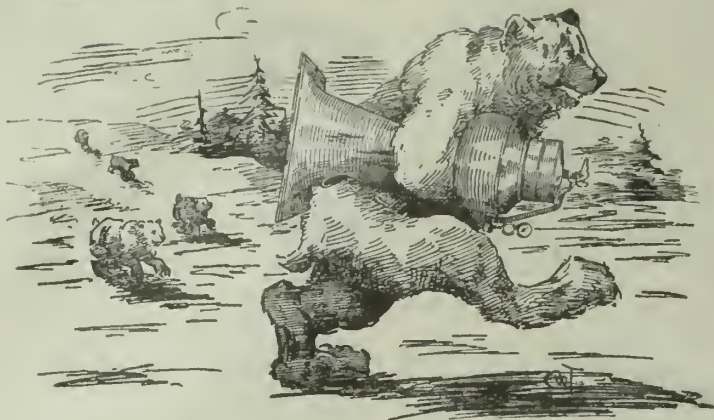
Faith, Hope and Charity

are the essentials for a model Christian, and HEIGHT, STRENGTH and ELASTICITY, for a model wire fence. In the first case, Charity is the greatest of the three, and in the other, Elasticity, but it must be the genuine article in both cases. If reformers could establish a great mill where ordinary mortals could be run through and as thoroughly fitted for good honest work as the product of our looms, what a Paradise this world would be. For further particulars in regard to fence, see small bills.

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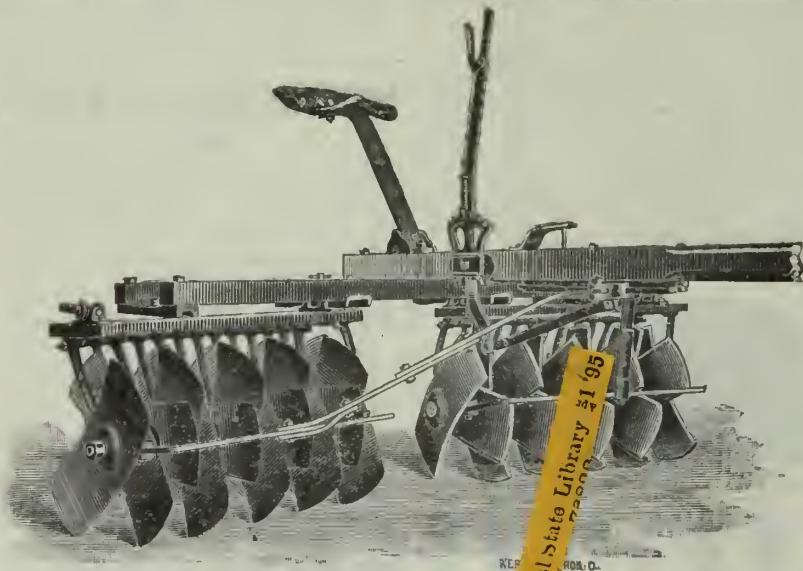
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SAN JOSE, April 27th, 1893.

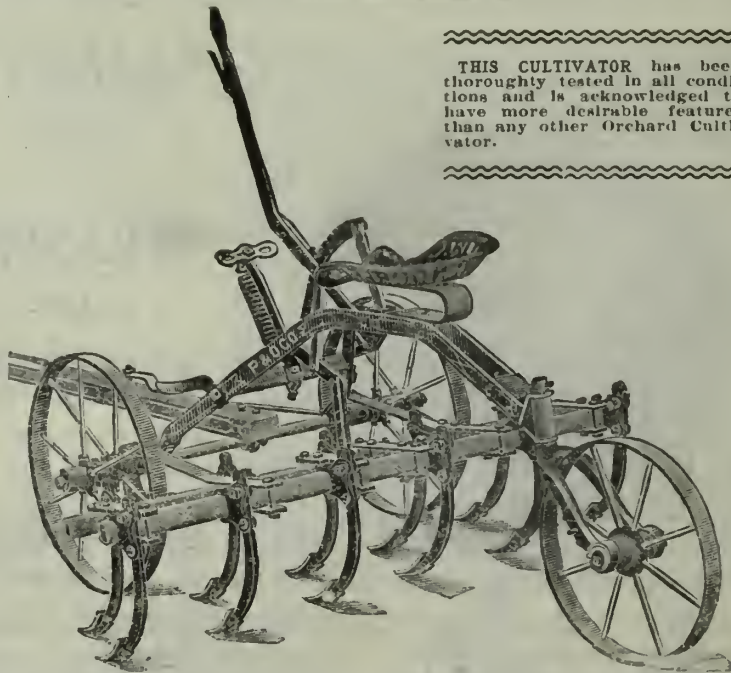
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VEHICLES AND FARMING IMPLEMENTS OF EVERY DESCRIPTION.

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THE SHANKS OR LEGS, to which the shovels are attached, are made from steel with their front edge made sharp. These Shanks or Legs have a series of holes so they can be raised or lowered to meet any requirements.

RAISING LEVER.—We have a combined hand and foot Lever, and have also put on a strong spring to assist the operator in raising the gangs. This improved construction makes this the easiest Cultivator to operate now on the market.

SIZES.—No. 6, five feet, 11 shovels; No. 8, six feet, 13 shovels; No. 7, seven feet, 15 shovels. Write for prices.

THE PACIFIC RURAL PRESS

AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 5.

SAN FRANCISCO, SATURDAY, FEBRUARY 2, 1895.

TWENTY-FIFTH YEAR.
Office, 220 Market Street.

The California Violet.

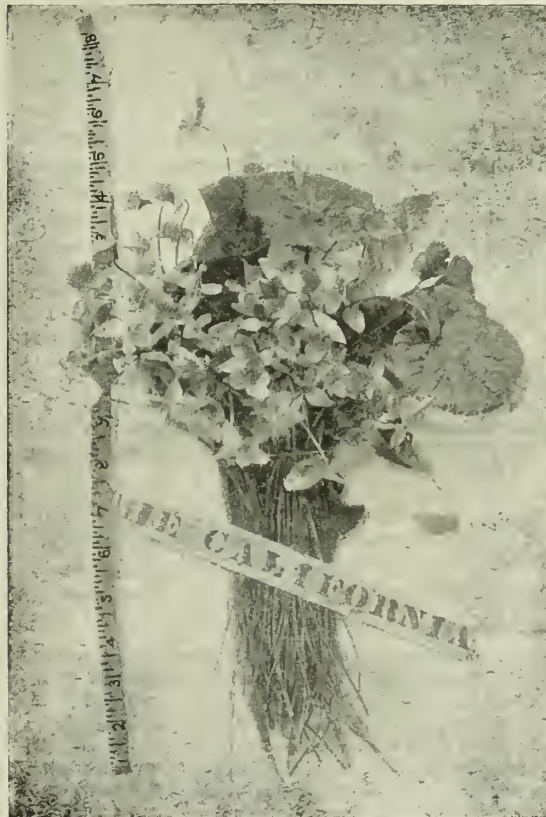
California violets are famous wherever California is known. Traveling Californians and tourist visitors who have wintered here have carried the fame of these winter blooms wherever listeners could be found. The great profusion of our open air violet bloom in midwinter is indeed one of the floral features of the State. It is fitting then that the name California should be given to a new variety which promises to be in seven senses the greatest of the violets. We have alluded to this violet before. It was first heralded about three years ago and the statements of its size and other characters were almost incredible. Distant hearers put them down at once as California story-telling applied to the violet. Soon afterward a few blossoms appeared at our flower shows as a great curiosity and then those who saw them had to admit their claims. At first it was proposed to give the plant the name of a prominent flower lover now deceased, Tiburcio Parrot, but the variety has been rechristened with a fitting patronymic: California.

We are not clear as to the origin of this variety, nor are accounts furnished fully satisfactory. Rumor has it that the variety originated in a florist's garden in South San Francisco, but exact times and names are not given, so far as we have seen. At present names only are given of those commercially interested in its introduction. We hope that later, when considerations at present ruling have passed away, we shall have the origin of the variety clearly and definitely worked out, if it be possible to do so.

For the engravings on this page, which give photographic record of the size of the bloom and the vigor and prolificacy of the plant, we are indebted to Cox & Co., the San Francisco seedsmen. Prof. Emory E. Smith, who was recently chief of the horticultural department of the Midwinter Fair, has done much to promote the variety, and furnishes this description: "It has been in course of propagation for three years, and has now attained its most perfect form, color, fragrance and size. It is a vigorous plant, absolutely free from disease of any kind, and so unlike many other violets. Its flowers are of immense size, sufficiently large to more than cover a silver dollar. Its color is a clear violet purple, and does not fade. The fragrance is intense, and the stems vary in length from ten to fourteen inches."

The record of the growth and blooming characters of the California are given by Joseph Carbone, who has had the variety from the first and is the largest grower for the San Francisco market. The first sales were made in 1894 at a price said to be ten times as great as that commanded by the old varieties, and this winter, under a much greater supply, the price is still much in advance. Mr. Carbone gives these notes of the behavior of the variety: "The California violet grows best in the open air, and thrives least well in a flower pot in the house. It is a sturdy plant and needs no coddling. The flowers commence blooming in October and are at their best in the months of February, March and April. The flowering season may be said to extend from October to June, though the plants do flower

earlier in the fall and later in the summer. It grows best in sunny weather, and after such heavy rainstorms as we have lately had will revive in an incredibly short space of time. It grows fast and



THE NEW VIOLET—"THE CALIFORNIA."

strong. In the summer but little watering is necessary—in fact, if kept rather dry, it flowers so much the better in the fall. I do not wet them more than twice a week in the summer, no matter how dry they



FIELD OF "CALIFORNIA" VIOLET NEAR SAN FRANCISCO.

may look. The leaves are large, regular, well formed and of a bright green color. A peculiarity of the flower is that it not infrequently bears two flowers on one stem."

Such, then, is the violet which is to carry the name of the State to the uttermost parts of the world. It is to be hoped that it may prove as notable under other skies as it has in the land of its birth.

Flowers Fashionable.

Flowers have become almost a passion with society and they are probably the most charming gods that society ever crushed with devotion. Of course flowers have always won heart tributes from humanity and have accomplished inestimable service in the elevation of the race from its earliest upward steps. This loyalty to floral beauty, which has always appealed to tender, poetic temperaments, is still a moving force, but it is now supplemented by new forces and new motives which pertain to the smile of the goddess fashion. It is a grand thing for the commercial interest of floriculture and it will also result in a great advancement of floral taste and cultural achievement. We do not know of a more innocent and charming direction in which society's gold could flow.

While this course of floral affairs has been frequently mentioned in our columns, the extent to which the rich are carrying their patronage of flowers is not generally appreciated. It is reported by telegraph this week that one of the New York Astors has given a Broadway florist an order for a cover of lilies of the valley and violets to be put over his wife's grave, fresh every day. This is said to be the largest single order for flowers ever given in New York. It means over \$100 worth of flowers for the grave every day. It means the experienced and laborious forcing of lilies of the valley during eight months that they do not grow in nature. Mr. Astor's instructions are that this cover shall be removed every day, no matter what its condition, and all the flowers in it be destroyed. It takes about 4000 lilies to make the cover and about the same number of violets.

To the ordinary mind this would seem to be an ostentatious arrangement and beyond good taste, but one has no right to criticize a mourner's manifestation. The result will be, of course, an emulation of Mr. Astor's cover, and no one can foresee to what ends of display the disposition will attain. Still there might be worse uses for money; and if Mr. Astor will arrange that the flowers, after their single day's service, shall be taken to the Flower Missions for their distribution to the sick and destitute, the arrangement will have a brighter side.

In a test of steel-clad aluminum horseshoes, made in Arizona by Lieut. Wallace of the Second Cavalry, U. S. A., it was found that the front shoes wore 306 miles, or twenty-eight days, and the hind shoes 260 miles, or twenty-three days. This was over very rough country covered with rock. It is thought that steel-clad aluminum shoes, which have particles of tempered steel pressed into the wearing surface of the shoe under great pressure, will meet all the requirements of ordinary cavalry service.

THE Ohio Wool Growers' Association held its annual meeting last week at Columbus. Strong resolutions on the tariff question were enthusiastically adopted.

THE average value per head of cattle exported from America last year was \$90; hogs, \$7; sheep, \$6.50. For 1893 the valuation was higher except for sheep, viz., \$92, \$22.50 and \$3.85 respectively.

PACIFIC RURAL PRESS.

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Chicago Office.....CHAS. D. SPALDING, 330, 189 La Salle St.

Registered at S. F. Postoffice as second-class mail matter.

ALFRED HOLMAN.....Editor.
E. J. WICKSON.....Special Contributor.

San Francisco, February 2, 1895.

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The Week.

Weather and Crops.

The cool clear days which are now on are of immense value to the State. The northerly winds are removing the surplus moisture and bringing much land into shape for the plow and the seeder. Work should be done as quickly as possible, for it will take very little time to put a hard crust on the surface which has been beaten down by the heavy rains or puddled by the standing water. The days are full of business in the country while this sunshine lasts. The prevailing low temperature is also very favorable to fruit interests by retarding bloom until the season really turns to continual warmth. Orchard work must now be rushed. Pruning, spraying and planting of new orchard should not be delayed. What we may expect in February is a matter of much interest. The monthly statement of the Weather Bureau is that during the last twenty-three years the warmest February was that of 1886, with an average temperature of 57°, while the coldest was that of 1887, with an average of 18°. The highest point on the thermometer touched in February was on the 22d of that month, 1888, when 76° were registered. The coldest February day was the 5th, in the year 1887, when 33° above zero was recorded. The average number of clear days in the month has been ten, cloudy days eight, and partly cloudy days ten. The prevailing February winds at San Francisco have been from the west. February is usually a good working month and it will be delightful to find it so this year.

Eagle and Coyote.

The eagle has done the coyote a very friendly turn, which in these degenerate days is much to be wondered at, for certainly calamity to the coyote signifies more juicy squirrels and rabbits to the eagle. The first bill made a law by Gov. Budd is that repealing the coyote bounty, which has cost the State hundreds of thousands of dollars for coyotes slaughtered all over the Pacific coast. How the eagle figures in the reform was in this wise. Galen Clark, Warden of the Yosemite, had sent the Governor two enormous eagle pinions, each two feet in length. A point was made on one of these, and an eagle quill

wiped out the coyote bounty with a few bold strokes. Haste was made in affixing the Governor's signature, because, after the passage of the act, word came in that special promoters were rushing in their scalps from all directions, in the hope of getting them in ahead of the time the act should go into effect. But the Governor brushed away their hopes, and did it with an eagle feather.

San Joaquin Honey.

The honey interest of the upper San Joaquin valley seems to be growing apace. At a meeting of beekeepers held in Hanford last week those present reported that they had produced in the aggregate about sixty tons of extracted and seven tons of comb honey. This was believed to be not more than two-thirds of the whole product of the region, so that we have a surplus of say 100 tons of honey from a region which is comparatively new to the bee business on a commercial scale. Ten carloads of honey is quite an item in a hard year, and this is probably not over one per cent of what could be produced if the interest of the people should incline that way and the market favor the product.

Tree Tent.

S. A. Borough of Grant's Pass, Oregon, writes us that he has been very successful in killing the green aphids on apple and other trees by using a tent in which he burns tobacco stems and refuse, making a dense smoke which kills all the aphides. He rigs a pole to his wagon frame so it can extend obliquely from the wagon, and from the top of it hangs a cone-shaped tent which is dropped over the tree. There is nothing new in the use of tobacco smoke for aphids nor in rigging a cover for a plant while fumigating, and yet the method of Mr. Borough may be suggestive to others who desire to clean small trees of aphids and other small pests. It would not do so well for scale insects, except perhaps just at the time that the young are running about before putting on their shells.

Pomelo Production.

The Eastern people who delight to tone up their interior with the agreeable acid of the pomelo or so-called "grape fruit" are apparently in danger of having to resort to grocery vinegar and other more energetic sourness. The Florida freeze has of course taken the pomelo with the rest of the citrus tribe and how is the Eastern market to be supplied? A correspondent of the Redlands *Facts*, writing from Florida, says that now is the time for California to go in with the pomelo, and he adds: "In my opinion California can raise finer grape fruit than Florida, as your grape fruit would be clean. The Florida grape fruit is apt to run largely to russets and that is not as salable as the bright. Very little of the grape fruit had been marketed, as it was all bought up by speculators and held for high prices. Probably about 25,000 boxes were frozen. I have just seen a wire from Boston saying that grape fruit that was picked before the frost was bringing \$8 per box there. It will no doubt bring \$10 in a few days, as there is not a box left in the State unfrozen." It is too bad we have no considerable number of bearing pomelo trees, and those we have are not of the best varieties. It might not be a bad scheme to graft in good varieties at once and get fruit as soon as possible. Probably many will do this.

County Game Ordinances.

Judge Dougherty of Sonoma has just rendered a decision which affirms the right of county supervisors to pass game ordinances according to the local needs of their areas. The Sonoma Supervisors passed an ordinance making it unlawful to catch or kill any fish in Russian river or its tributaries except between April 30th and November 1st. It was contended that the Legislature had no power to delegate its legislative powers to boards of supervisors to enable them to pass such ordinances, and that, accordingly, it was unconstitutional. Numerous authorities were quoted to sustain that view of the case. Judge Dougherty, however, held that the Act is constitutional. The power of the county to pass such laws is clear, he says. It is a police power and not in conflict with the general laws of the State. This is the first time this question has been decided in the State, and it is of great interest to sportsmen.

Orange Movement.

The most intense activity now rules in the orange districts of the South. The recent heavy rains almost entirely suspended shipments, as the ground was too wet to allow teams to go into the orchards. But the delay was all the better for the fruit, as it gave more time to ripen. Orange picking has been resumed all over southern California within the past few days, and many carloads of fruit will be moving by the end of the week. Reliable reports from all districts say the crop was never in better condition, none of the fruit being ripe enough to be injured by

the late rain. Not a particle of frost has as yet occurred in the citrus belt, and it is now regarded as too late for danger from that source. The Co-operative Fruit Exchanges claim to have control of four-fifths of the crop, which is estimated at 6000 to 7000 carloads, or about 2,000,000 boxes. The Exchanges established prices early in January, which have not been changed to date. The quotations furnished are \$1.50@2.25 per box for Navels, according to quality, and \$1.20@1.75 for Seedlings, delivered for cars. Mr. P. E. Platt, who is now Eastern agent for the California Exchanges, and is stationed at Chicago, informs the Eastern consumers that the Exchange has not made any material advance in the price of California oranges. It would endeavor to hold prices on such a basis as to insure the widest possible distribution. This is good policy, and it will have a good effect in other years than this. California oranges never had so good a chance to make themselves widely known at the East.

Cattle Protection.

So long as California has no State veterinary system such as is provided in almost all the Eastern States, it is very important that the counties should act in the protection of their own interests. What can be done is shown by the county of Fresno. Last week County Veterinary Inspector Graham submitted to the supervisors a full report on the contagious diseases prevalent among cattle and other animals in his section of the San Joaquin valley. Dr. Graham has condemned and destroyed from January 1, 1894, to January 1, 1895, twenty-six mules and twenty-eight horses affected with glanders. Several cases of lumpy jaw have come to his notice within the past year. Stringent measures are recommended against the sale of meat or milk from animals afflicted with this disease and with consumption. Splenic fever, or anthrax, is another disease mentioned. Dairymen and cattlemen lose a large number of cattle every year by this plague. He estimates that 1800 head of cattle have died of this disease during the season of 1894. Seven miles southwest of Fresno nineteen dairy cows died of the disease in August last. He found dead cattle and horses lying all over the affected district, polluting the air and scattering the germs of disease. No measures have been taken to prevent the spread. There are several well-authenticated cases in this county, the doctor adds, of people becoming inoculated. He concludes: "When the heavy hand of the law is invoked to compel owners to destroy at once the carcasses of the animals that have died of the disease and make it a penal offense to sell infected meat and dairy products, then one step will have been taken in the right direction."

Pure Food Show.

The Pure Food Show opened at the Pavilion in this city on Monday of this week and already its success is assured. The exhibits, which include a wide range of food articles, are high-class and are beautifully displayed. A conspicuous feature of the show is the exhibit of the State Horticultural Society, from which dried fruits properly cooked are given free to all who will partake. Mrs. Lincoln's lectures on cooking, given in connection with the Show, are attracting crowds of women and promise to be a prime attraction throughout the fair. Her discourses are of a practical sort and are illustrated by actual cooking operations carried on upon the stage. The Show will continue until the middle of February.

Gleanings.

There is a candery agitation on just now at Auburn. Says the Colusa *Star*: "No man should plant an orchard of any kind unless he intends to give it proper care. An orchard of ill-kept, scrubby trees is not only unprofitable in itself, but an eyesore to a thrifty community, as well as a standing menace to other and better orchards. It does not take long for the pests of one neglected orchard to seed the whole neighborhood." The towns in the neighborhood of Sacramento into which have poured the vagrants who were recently driven from the first named, are complaining bitterly. A Dixon correspondent says: "Hobos are now numerous here, since the exodus from Sacramento. Of course we are poorly prepared to feed them and powerless to resist their intrusion, and thus the opulent city has shifted its burden to the shoulders of our already overtaxed country." Says the Kern Co. *Echo*: It has been discovered that the jumping bean, which has recently become such a fad and is being imported into the United States from Mexico in large quantities, may become a source of serious trouble to our farmers. The "jumping" is the work of the larva of a small moth confined in the bean. When this moth becomes liberated, it rapidly increases and is especially destructive to fruit trees.

HANFORD Journal: The Horticultural Commissioner of this county, Mr. Motheral, last week requested the Board of Supervisors to pass an ordinance making the destruction of limets compulsory on the agriculturists of Kings county. He informs us that, upon examining his orchard recently, he found the ground beneath his apricot trees (all except the Royal) and white nectarine trees, strewn thickly with buds, pecked off by a flock of linnets. The reason the birds do not do the same with the buds of the Royal 'cot is because they are more bitter to the taste.

From an Independent Standpoint.

There has come a sudden stirring of the blood of San Francisco in connection with the project for an independent railroad through the San Joaquin valley. Mr. Claus Spreckels has subscribed half a million dollars toward the enterprise; two of his sons have subscribed one hundred thousand dollars each; others have subscribed enough to bring the total up to a million dollars; and other subscriptions already pledged will increase the fund to two millions or more. Such a display of spirit has not hitherto been seen here; and it is accepted by everybody as the beginning of a new era in the career of San Francisco and of California.

An independent railroad through the San Joaquin valley has been talked about in a vague way time out of mind, but it was first given the character of a definite project something less than two years ago by the local organization of merchants known as the Traffic Association. They estimated that it would cost six millions of dollars to build a road from this city to Bakersfield and properly equip it; and undertook to raise three hundred and fifty thousand dollars by subscription as a basis for an issue of bonds, from the sale of which they proposed to build the road. Evidently, the people had small confidence in the scheme of the Traffic Association, for a canvass of the city yielded pledges aggregating barely one hundred and twenty thousand dollars. Foreseeing the collapse of the project unless it could find stronger leadership, the president of the Traffic Association ten days ago called a meeting of large holders of real estate and put the facts of the case before them. The result was the appointment of a committee of twelve, with Mr. Spreckels as chairman, to take the project off the hands of the Traffic Association, to consider its merits as related to the interests of the city and State and (in case of its adoption) to devise ways and means for carrying it into execution. It did not require much study of the situation to convince all the members of the committee that the projected road was a vital necessity. Mr. Spreckels in particular was impressed profoundly with the fact that the future of San Francisco required this road; and with characteristic promptness he announced that for himself and his sons he would subscribe seven hundred thousand dollars.

This act gave the project what it has all along wanted, a definite and strong leadership. There was immediate enthusiasm for it; and it was resolved to raise two millions and put the work through with the least possible delay. Attorneys were instructed to draw up the necessary papers at once, and when these were submitted to the committee on Monday afternoon of this week those present—sixteen persons—promptly subscribed the amount stated above—\$1,025,000. Thus more than half the money required has been raised before the lists have been circulated, and there is no manner of doubt that the balance will promptly be forthcoming. Mr. Spreckels—whose enthusiasm for the project has reached a white heat—declares that not two millions but four millions will be raised; that the country will be asked to give rights of way and station grounds; that the road will be built at once and for cash without any bother about bonds. Since Mr. Spreckels is known as a man who means what he says, and since he is quite able to build the road alone three times over if it suited his purposes, his assertions are accepted as of absolute authority. Nobody doubts, in fact, that the thing will be done according to program; and already the effect upon the spirit of the city is manifest. The people and the newspapers are talking about a "New San Francisco," in which the old timidity and lethargy are to be succeeded by business courage and energy and a new sense of responsibility in the relationship of the city to the State.

We shall not attempt to state the arguments in support of this railroad project, for all the pages of the *Rural* would not afford space enough for their spreading forth. It is enough to say that the traffic of the great valley has been absolutely dominated by a single railroad company whose effort has been to get from the country every possible dollar. There has been no large-minded co-operation with the people, but, on the other hand, the persistent operation of an exacting policy looking to the maximum immediate gain. By an arbitrary arrangement of rates, the traffic of the country has largely been forced into artificial channels that the railroad might have the "long-haul" from Chicago instead of the "short-haul" from San Francisco. Other exactions in the same spirit have made such a burden for the people that it has become intolerable. Naturally, the country has languished. In spite of its incomparable advantages of climate, soil and proximity to the sea, it has made relatively small progress. Under the recent hard conditions, a large proportion of the people are growing actually poorer.

These facts have, of course, been reflected in the dullness of trade and in general stagnation at San Francisco; but the city has been slow to conceive the situation and still slower to act. Her business methods, formed in other times, have not been adapted to aggressive courses. Her wealth, achieved largely in speculative fields, has lacked the guidance of trained business intelligence. Her most potent men have been in alliance with the transportation monopoly. Circumstances, not very creditable to it must be confessed, have hindered the up-growth here of anything like a system of public-spirited leadership.

For twenty-five years there has been nobody in whom has been combined the will and the strength to command the resources of San Francisco in the cause of her emancipation, and to use them for the re-establishment of the natural relationship between her and the productive regions immediately about her. It appears now as if the great need had at last found the man in Mr. Spreckels. He has magnificent capacities trained in large affairs;

he has the prestige of great business success; he has vast personal wealth; and apparently he has that which is needed to give to those resources great potentiality, namely, a high spirit of resolution. Talking with a reporter on Saturday, he said: "*I am well enough off to go to Europe and live as well as the Emperor William, but my home is in San Francisco and California. Here I mean to remain. I want to see the city and State prosper and am willing to do my part to that end.*" Great things may reasonably be expected from the leadership of a man who can thus speak. It will be a leadership not of sentimental and open-hand beneficence, but a sort which will quicken the courage, inspire the resolution and stimulate the energies of the city. It is not what Mr. Spreckels will do for San Francisco, but what he will help San Francisco do for herself, that will count. His leadership will mean the throwing off of conservatism; it will mean a union and an energy of forces wholly unprecedented in California; it will mean a new spirit and an unexampled progress. The movement will not stop with the San Joaquin valley road. To the north, to the east, to the south there are other fields equally inviting and to them in turn must be directed the energies which just now are centered in the San Joaquin.

A significant advantage of the San Francisco-Bakersfield road will be in the circumstances of its construction. It will, Mr. Spreckels declares, be built for cash; it will be built at a time when all the elements of cost—rails, ties, teams, labor, equipment—are at low-water mark; it will be the property of San Francisco and for use as a weapon of defense. It is declared that, when finished, it will represent an investment of about \$15,000 per mile, or a total of \$5,000,000. A fair profit on this investment will be six per cent per annum; and it is planned to operate the road on that basis. This, so it is said, will call for gross annual earnings of \$4000 per mile, or \$1,600,000 for the whole line. Now, the Southern Pacific line through the San Joaquin valley is, it is declared, capitalized at upwards of ninety thousand dollars per mile, while its annual gross earnings are approximately \$8,500,000. These are the figures given by the Traffic Association, and we quote them without verification.

The policy of the Southern Pacific in the San Joaquin is easily understood. The company has a vast mileage, much of which is through unproductive country. Its construction was in times when the cost was vastly greater than now. Injections of water and fraud and blunders have vastly expanded the capitalization upon which it must earn dividends; its management is absurdly expensive; its system of political domination is another item of large cost. To find the funds to support this system has called for severe exactions in every department and the screws have been turned on hard, especially in rich sections like the San Joaquin, where, in the absence of competition, the people have been helpless. It is easy to see how a road like that now projected, built in economical times for cash and operated upon business principles, can serve the country and still find a reasonable profit under a system of charges amazingly small as compared with those the people are now required to pay.

Another fact which gives inspiration to the talk of a "New San Francisco" is that the United States Senate has just passed the Nicaragua Canal bill by a vote of 31 to 21. The measure now goes to the House of Representatives, where the canal project is presumptively in greater favor than in the Senate. The obstacles which the bill is likely to meet are not those of opposition to the project itself, but of objection to the particular scheme of Senator Morgan, which has been many times outlined in the *Rural*. This scheme provides for the organization of a canal company to succeed to all the rights, interests, etc., of the existing Maritime Canal Co. The capital stock is fixed at \$100,000,000. Of this amount \$70,000,000 is to go to the United States as paid-up stock. To the Government of Nicaragua, \$5,000,000 of the stock must be given for the concessions, and \$1,500,000 to the Government of Costa Rica. To extinguish all issues of stock or bonds heretofore made by the Maritime Canal Company, new stock is to be issued to the company to an amount not exceeding \$7,000,000; and as the new stock shall be issued, the old stock of the company is to be canceled. The seventy millions of stock to the United States is to be issued in consideration for its guaranty of the bonds of the company. Ten of the fifteen directors of the company are to be appointed by the United States, through nomination by the President and confirmation by the Senate. Objection in the House is likely to be based upon unwillingness to any plan which—as this does—would involve the Government in a partnership arrangement.

Upon considerations which it has many times stated, the *Rural* sympathizes with the objection, believing that it would be a grave blunder to involve the Government in a bargain which in itself would negative many of the more important advantages of the projected work. We would like to see the canal put through as a national work, and, when finished, operated by the Government for the national advantage. This, we believe, cannot be done under the plan proposed in the Morgan bill. Furthermore, a partnership arrangement would, in the nature of things, be a fruitful source of Congressional jobbery, just as in the case of the Union Pacific railroad. From what we can learn of the sentiment prevailing in the House of Representatives, we do not believe that the Morgan bill will be accepted, but that another and better measure will be substituted for it. The danger is in the shortness of the time between now and the death of the present Congress. There is, we fear, hardly time enough before March 4th for the House to amend and pass the Canal bill and for its reconsideration by the Senate—especially since the Administration will throw every possible obstacle in its way. That Mr. Cleveland should be so dead-set against the canal project is only comprehensible upon the theory that the financial powers of New

York—whose judgments he persistently reflects—do not want it.

The breakdown of the financial plan suggested by Secretary Carlisle, and approved by Mr. Cleveland in his Annual Message to Congress, is complete, and all efforts to revive it have been abandoned. In a special message to Congress on Monday of this week, Mr. Cleveland calls fresh attention to the condition of the Treasury, confesses the failure of the policy by which he has within the past twelve months added one hundred millions of dollars to the interest-bearing debt, and calls upon Congress to provide some way to maintain the ability of the Government to meet its obligations in gold. To meet the immediate necessities of the situation, he recommends that Congress authorize a gold loan at 3 per cent running fifty years—sufficient in amount to retire the Treasury notes, of which there are \$500,000,000 outstanding. He says:

These bonds under existing laws could be deposited by national banks as security for circulation, and such banks should be allowed to issue circulation up to the face value of these or any other bonds so deposited, except bonds outstanding bearing two per cent interest and which will sell in the market at less than par. National banks should not be allowed to take out circulating notes of less denomination than \$10, and when such as are now outstanding reach the treasury, except for redemption and retirement, they should be cancelled and notes of the denomination of \$10 and upward issued in their stead. Silver certificates of the denomination of \$10 and upward should be replaced by certificates of denominations under \$10. As a constant means for the maintenance of a reasonable supply of gold in the Treasury our duties on imports should be paid in gold, allowing all other dues of the Government to be paid in any other form of money.

The *Rural* must confess its inability to comprehend just what the President means. We gather, however, that he proposes to exchange a Government obligation which bears no interest to one which bears three per cent—which would no doubt be entirely satisfactory to the money-dealing interests which speak through Wall street. If by such a change, even at such manifest cost, our Government might stop the ruinous course of the silver discount, it would perhaps be wise; but this is not Mr. Cleveland's idea. He goes no further than to urge the maintenance of gold payments, apparently blind to the fact that this does not touch the vital part of the great financial question. The persistence with which he ignores the central and vital point in this matter is irritating to the last degree. The *Rural* has all along, in spite of his blunders and his failure to meet his promises, declared its faith in Mr. Cleveland's good intentions; we still believe him to be an honest man, but it is impossible to repress the judgment that in some things he is a densely stupid man. Evidently no help is to be had from him in the financial problems which confront the country.

However, because Mr. Cleveland persistently ignores the most significant fact in the whole financial question does not prevent its recognition by other persons. More and more it is becoming evident that the country at large has a true conception of the principle of the silver discount—a conception not only true, but so profound that no such device as Mr. Cleveland proposes will be satisfactory. Even those who do not profess to any detailed knowledge of the subject are coming to understand that the decline in the value of silver means an advance in the value of gold, and that the direct consequence of this fact is the reduced value of everything else in comparison with gold. They are beginning to see also the injustice involved in the single gold standard under the steady accretion in the value of gold. And wherever these facts are perceived they profoundly stimulate the sentiment for bi-metallism. Mr. Albert Shaw, the widely-known writer, asserted recently, after a visit to Washington, that there was manifest in that great political center a marked advance in the bi-metallist movement. There is now on in the neighboring State of Oregon a bitter Senatorial contest, opposition to the candidate presumptive being based upon his record as a gold monometallist. In our own State it is plainly to be seen that the bi-metallic idea steadily gains ground. If in the Presidential office there were a man capable of seeing the subject in all its relations, there would be reasonable hope of getting out of the mire within the next year or two, but, as it is, we have small hopes of relief for a long time to come. The danger is that, under the irritation of delay, political prudence will be thrown to the winds and that silver monometallism—which is even worse than gold monometallism—will be forced upon the country.

The *Free Press* of last week publishes a list of the principal products and the amounts thereof that were raised in Ventura county during the past year, from which the following is taken: "Only a small acreage planted to beans returned anything like a full crop. Barley was comparatively a failure. In view of the fact, however, that the list does not include many products that were shipped in small quantities, the showing is quite creditable for a dry year. Total amount of beans shipped, 21,487,020 pounds; total amount of dried fruit, 944,988 pounds; total amount of green fruit shipped, 819,645 pounds; total amount of nuts shipped, 440,852 pounds; oranges and lemons shipped, 23,023 boxes; corn, barley and honey shipped, 7,986,417 pounds.

ORANGE GROWERS of southern California have decided to hold a citrus fair at Los Angeles in the latter part of February. Noting this fact, the *Riverside Press* says: "With Mr. Naftzger as president, Mr. Wiggins as superintendent, and Mr. Backus as chairman of the committee to prepare a premium list and to select judges, there would seem to be little more that could be done to make the project popular and win success. The feeling of those present at a meeting held recently seemed to be that it would be practically an exhibition of the Fruit Exchanges of southern California, and that it would help to advertise and strengthen the co-operative movement of the growers."

The largest apricot tree in the orchard of the Government Experiment Station at Paso Robles is a five-year-old "Smith's Triumph," a Vacaville seedling, whose branches spread over a circle nine or ten feet across.

Rainfall and Temperature.

The following data for the week ending 5 A. M., January 30, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

CALIFORNIA STATIONS.	Total Rainfall for the Week.	Total Seasonal Rainfall to Date.	Total Seasonal Rainfall Last Year to Same Date.	Average Seasonal Rainfall to Date.	Maximum Temperature for the Week.	Minimum Temperature for the Week.
Eureka.....	.22	28.62	35.66	21.22	54	32
Red Bluff.....		22.80	14.45	15.76	54	30
Sacramento.....		19.70	9.19	11.30	54	32
San Francisco.....		19.66	12.81	14.16	54	38
Fresno.....		8.79	3.89	6.80	53	30
Los Angeles.....	.16	11.18	5.32	11.28	64	36
San Diego.....	14	0.58	3.22	3.35	62	36
Yuma.....	2.97	1.42	2.16		66	36

Removing Warts from Cows' Teats.

TO THE EDITOR:—We have a maiden heifer just due to calve, and on the "near" hind teat there is a large wart, or what looks like a wart, which I am afraid will give us trouble when we have to milk her. I believe it is very likely to bleed and also make her kick, and should like your advice on the subject as to the policy of trying to remove it, and if so, how. Pearyn, Cal.

FRANK BUDGETT.

ANSWER BY DR. CREELEY.

Get the best horseman in the vicinity to use a good sharp knife, and have an iron red hot. Cut off the growth deep enough to get all the roots. If it bleeds much apply the hot iron.

Another way is to rub once daily over the growth nitrate of silver; in about one week the wart will dry up and drop off.

Another way is to get a rubber band, stretch it and place it tightly around the base of the growth. In three days it will drop off without losing one drop of blood.

Another way is to powder on the following: Sulphate iron, one-half ounce; sulphate copper, one-half ounce; Monsell's iron salt, one ounce.

I prefer the knife and hot iron, but advise to let the wart entirely alone until after calving, as any undue excitement is bound to cause abortion.

DR. E. J. CREELEY, D. V. S.

510 Golden Gate Ave.

Future of the Horse Industry.

A special report prepared and issued in Massachusetts declares that the future of the horse trade contains more of promise than it has at any time during the past two years, and that there are reasons for the belief that 1894 will see the beginning of a decided improvement and a material appreciation in values. The report continues in this wise: "Breeding has been largely overdone, and throughout the United States generally it has been largely abandoned during the last year and a half. Depreciation in some States amounts to twenty-five or fifty per cent compared with two years ago, so far as the cheaper class of horses is concerned. Compared with a year ago the census of horses is a full one. Quality has sharply deteriorated during the last three years, leaving a surplus of poor horseflesh and a dearth of good ones. While markets are glutted with cheap horses, there is a ready outlet for first-class animals at prices about as high as at any time in years. In many States there is an absolute scarcity of heavy draft animals and choice drivers. Abandonment of the horse industry in hundreds of communities may mean a shortened supply to fill a demand which will spring up with the revival of business activity. To a great extent the way out may be found in breeding better horses. The improvement in the foreign demand is encouraging, but this is confined to the best grades." It is alleged that the report above referred to has been carefully compiled, and therefore the findings quoted may be relied on by breeders generally.

THE Oroville Register says: G. B. Springer has seven olive trees in bearing; of these one is twelve years old and the others younger trees which bore this season about a gallon apiece. His family consumed and gave away several gallons of the olives and then he sold enough to come to \$23.25 at 85 cents a gallon. Estimating four gallons consumed and given away would leave about twenty-eight gallons for the large Mission. He will plant this season fifty additional trees, including some of the best budded varieties. His first olives were picked on November 1st and the first ones sold on November 14th. The profit from the twelve-year-old tree was about \$28. * * * Geo. LaRose has been experimenting in pickling olives for the last four years and says the great mistake that most growers make is in putting the olives into brine too strong after taking them out of the lye. They should be placed at first in a weak brine and then a week later in a still stronger one. By doing this the olives will keep in good condition for many months.

The Proposition for an Export Bounty.

For some time past the project of an export bounty has been energetically agitated in this State and elsewhere by Mr. David Lubin, a well-known merchant of Sacramento. Although frequently invited to do so, the RURAL PRESS has never taken up this subject because its discussion in detail would involve an amount of labor and of space which we have thought might better be devoted to other things. The practical answer to the plan as offered by Mr. Lubin is that it has been tried in other countries and discarded. Again, it is by no means a new idea in this country, having been proposed and discussed elaborately so long as ten years ago by Mr. W. H. Mills. A letter written by Mr. Mills to Mr. Stanford, when the latter had just entered upon his office of United States Senator, remains at once the clearest and briefest exposition of this idea from the affirmative side; and since the subject is now freshly before the public, we give the letter in full:

SAN FRANCISCO, July 22, 1885.

Hon. Leland Stanford, San Francisco, Cal.—DEAR SIR: The policy of protection is only partial in its operation and divides industry into two classes, to wit: protected and unprotected products.

The industry engaged in producing unprotected commodities pays protected price for all it purchases to the protected side. It sells its product in an unprotected market. To illustrate: The farmer buys a plow, his clothes, his sugar and other articles at protected prices. He sells his wheat at a market rate determined by the consumption of breadstuffs throughout the world, and therefore receives an unprotected price. Your familiarity with this fundamental principle absolves me from further presentation.

Now to the second step: The tariff produces a surplus revenue, and the problem relating to its distribution is before the nation. Because of this surplus bad schemes are projected, such as the River Improvement Bill, which appropriated \$18,000,000 to be wasted and squandered in the improvement of the levees along the Mississippi.

To distribute this, I propose an export premium on cotton, wheat and corn, the three staples of export. Suppose the Government should give an export premium of two dollars per ton on wheat out of this surplus revenue. California exports about one million of tons per annum. This would give to the California exporter two millions of dollars. Mr. Flood is engaged in exportation. Suppose he desires to export two hundred thousand tons. At \$2 per ton the Government would owe him \$400,000—a handsome profit on a year's transaction. He could therefore afford to pay the producer the full rate obtained for the sale of the wheat and depend upon the export premium for his profit. This would stimulate export, because exporters would find foreign markets and by their enterprise introduce American breadstuffs among the rice-consuming populations of the world, the export premium acting as a subsidy to induce the broadest enterprise. I would propose a further export premium of \$2 per bale on cotton. The State of Texas produces about one million of bales per annum. This would give to the exporter two millions of dollars, and by the process already noted would distribute that \$2,000,000 as a subsidy to the cotton growers of the State of Texas. Likewise, I would give one dollar per ton export premium on corn. In this way the unprotected industries of America would derive a pecuniary benefit from the tariff established to protect the manufacturing industries. The effect would be to balance up the benefits, produce a perfect repose of the system, reinforce the protection side of the question, satisfy the unprotected interests and affect an equitable distribution of the surplus revenue. It would be popular with the agricultural interests, especially the cotton interests, and would not be unpopular with the manufacturing sections of the country, because it would produce an alliance between the protected and unprotected industries of the country.

In 1883 there were exported from the United States three million tons of wheat and one million tons of corn. My proposition would require but seven million dollars to meet the export premium on wheat and say ten million dollars to satisfy the export premium on cotton, the annual export of cotton reaching about five million bales. To be accurate, the export for 1893 was 3,723,000 bales, but the crop for that year was light. The plan, then, would distribute about twenty millions of surplus revenue per annum. This does not sound like a large sum, but there is a view of this case which you will so readily comprehend that its bare suggestion will become apparent. Wheat land in California in a good season produces about one ton per acre; you are therefore adding \$2 per acre to the product. Good land in the South will produce one bale of cotton per acre, and you will therefore add \$2 per acre to the product. These \$2 are ten per cent on \$20, or five per cent on \$40, per acre. I do not maintain that this export premium would add this value to the land, but I do maintain that it would add a value of \$10 to every acre capable of producing one ton of wheat or one bale of cotton per annum. The agricultural interests would therefore be strongly in favor of the measure.

Arising out of this by logical transition is the question of the perpetuity of the tariff. To have its legitimate effect upon the industries of the country, the tariff must be permanent in its operations. The liability of Congressional modifications is a standing menace on the destructive side in respect of establishing manufacturing enterprise. To secure for the agricultural interests in the manner proposed a share in the benefits of protection, I would propose by constitutional amendment the permanent establishment of the tariff of the country, after the following principle:

First.—To establish by constitutional amendment the existing tariff with the provision that time shall work an ad valorem reduction of five per cent for each two years, only providing that Congress shall have the right to make such ad valorem modification of the tariff or increase during any Congress, the object being to limit the effects of Congressional legislation to five per cent in each two years.

Second.—I would further provide that the ad valorem reduction of five per cent for every two years might be arrested or suspended by Congressional enactment for a period of two years only, without renewed action; that is, Congress could in any session suspend the operation of the constitutional reduction of the tariff for two years, or during the continuance of that Congress, but such suspension would not operate during the tenure of a new Congress. By these devices you would give constitutional to the existing tariff, a measure of high value in the estimation of protectionists; and, secondly, you would establish a gradual elimination of the tariff. The proposed reduction of five per cent for each two years, if permitted to operate, would eliminate the tariff in forty years.

Third.—You would limit the power of Congress to disturb the prices of manufactured commodities by restricting the influence of Congressional action within five per cent of the tariff rate.

Fourth.—You would secure at once a treatment of the question on the ad valorem system, and protect the country against menace of a horizontal interference.

All these measures would be popular with the protection

side. It would reconcile the low tariff and free trade side of the question. You have the compensation of the unprotected product in the export premium, and to the gradual reduction which the constitutional provision would effect. Here, then, is a great compromise ground between the extremes of high protection and free trade, one which I am fully persuaded would be readily accepted by the country.

These suggestions arose in my mind during the solitude of a voyage from New York to Liverpool. I have made no publicity whatever of the suggestion, reserving its publication to maturity in all its branches. I have reviewed it from every standpoint with the utmost care and have ceased to regard it as chimerical, but rather to regard it as entirely practical, and possessing a high economic value. I submit it to you for your considerate reflection, and if these suggestions shall appear to be justified by your judgment and you deem it worth while, I shall be glad to furnish further elaboration of them. Very respectfully yours,

WM. H. MILLS.

This letter was written ten years ago and refers to some conditions—notably the surplus in the U. S. treasury—which time has significantly changed. We understand that further observation and maturer reflection have convinced Mr. Mills that the project is not a practicable one. The letter is given, therefore, not as representing Mr. Mills' views—for it no longer represents his views—but as a complete argument in support of the scheme for an export bounty, since rejected by its author. While the RURAL cannot go into a general discussion of the question, it may be said in passing that the fatal fact in the export bounty scheme is that it would make Government more expensive and therefore make heavier taxes for the people to pay.

The Weather, Farming and Other Topics from the Upper Valley.

TO THE EDITOR:—The month of January, 1895, will long be remembered by the people of northern California as one of the most boisterous on record. Signs of the coming programme were not wanting in December, as the weather had become fickle between rain and sunshine; but the last day of the old year was as warm and agreeable as a June morning, justifying the prediction that the winter was well over and that the planting and growing season had already begun. But it soon became evident that the new year declined to have its weather dictated to by the old administration, and began to assert its own prerogative in a manner not soon to be forgotten. It began by blowing and raining; then the wind and the rain got mixed up; then both set in and howled and howled and howled until the weather clerk was called to the scene. He issued his proclamation for a modification of the storm, reducing it to showers, with an ultimate cessation of hostilities, but every sprinkle was a cloudburst, so to speak, and every shower was a twenty-four-hours' battle, and every breeze was a blast. Then the clerk took a vacation and we were left to the tender mercies of the uncontrollable weather. Calm, warm sunshine, unheralded and unsung, followed on the 23d of January—one of the worst storms of the season prevailing the day before—and at this writing seems to have assumed control of the situation. The effect of a preelation of nearly or quite twenty-five inches of rain in three weeks on valley lands seems almost disastrous. Our lands, though open and friable, were unable to swallow the more than double dose. The top drainage being intercepted by intervening swells in the fields has reservoir much of the water on top of the soil; hence the country is very wet just now and many remain so, which will make cultivation and seeding late and hazardous. Very few farmers had begun seeding, though all were plowing and a few had finished.

All grain sown and not now under water looks well and is growing. Pastures are ample but too wet to be utilized, hence all farming animals have to be housed and fed until the fields harden sufficiently to bear them up. No prediction can be made with safety with respect to the acreage to be seeded. In December a very large area seemed probable. It cannot be as large as expected, but may still be an average or over if the season is favorable hereafter—that is, if the water disappears. In all such seasons late-sown grain does well as a rule, and prosperous times have generally succeeded a superabundance of moisture.

Nevertheless, my dear sir, during a programme such as we have just passed through, the "oldest inhabitant" feels like entering a cave or hollow log until the storm has gone by. Still, these idle spells give time for reflection and a study of "where we are at."

I notice that the RURAL suggests swine growing and improving as a diversion, which is timely and interesting and is practiced to a considerable extent in our own and surrounding counties. Swine, to be profitable, must be grown on cheap feed. The present season all manner of feed has been cheap, hence the hog crop was large and will be large the coming season. But grain at a cent a pound and over does not make profitable pork unless prices are high, which, it seems, is not regulated by the price of the feed.

It is well known that the State does not produce its requirement of swine product, and that enormous quantities come to us from east of the Rockies; yet at killing time our markets descend to a lower level than they do anywhere beyond the Sierras, from whence comes the surplus of other States. Thus do our consumers pay the Eastern prices, freight added, while the producer here gets less than Chicago, St. Louis or Omaha quotations. The situation demands a remedy, or remedies, and I hold lies within reach of the California swine grower. First, let us grow the small and always fat pig that requires but little feed. Next, let the farmers co-operate in neighborhoods, towns and available points in converting their hogs into hams, bacon and lard. This would require very little capital, and seems to me perfectly feasible.

Having already overreached permissible space, I must desist further trespass on your columns and patience. But this swine question is a live one, even if the crop of '94 is out of the way, and will keep for future discussion as to how best to grow and market this product of the farm.

Yuba City, Jan. 25, 1895.

GEORGE OHLEYER.

CINCO Champlon: Mr. Gird is at present feeding beet pulp to hogs with such good results as to be somewhat of a surprise to those who have read in Eastern and European publications that hogs would not thrive on this feed. Mr. Watkin Shone, who has charge of Mr. Gird's dairy and stock about it, tells us that he is feeding between 90 and 100 head of hogs on pulp, and he says he doesn't believe a better feed can be found than this. To the young pigs he feeds milk and squish with the pulp, but to the older hogs he feeds scarcely anything but beet pulp. They are taking on flesh rapidly, and are particularly healthy and thrifty. While some of the hogs on other parts of the ranch are not doing as well as they should, these have not been unhealthy a day since being fed on pulp.

HORTICULTURE.

State Horticultural Society.

An Informal Reception to Visiting Members of the American Pomological Society.

The January meeting of the State Horticultural Society, held last Friday afternoon at the usual place, was devoted almost wholly to an interchange of greetings between the members and visiting members of the American Pomological Society. President Lelong opened the meeting with a pleasant expression of satisfaction at the presence of so many visitors, and called upon President Berckman of the Pomological Society to respond. Mr. Berckman replied briefly but most graciously. He said that himself and his associates have been so generously received and so royally entertained and so variously instructed that he had not words enough to adequately give thanks. They should, he declared, bear away with them the most agreeable memories and only wished they might have the chance some day to return the compliment.

Dr. Hexamer, of New York, widely known as the editor of the *Agriculturist*, next spoke. His chief surprise, he declared, was at the vast area of the best land and the ease with which it can be tilled and watered. He could but wonder what was to be done with the output of this vast area when it should all be brought into production. Already there was overproduction; and as he read the situation, the California problem was one of marketing. Its solution, he thought, lay in the co-operative principle and California would soon be forced into its application. Agencies for the sale of California fruits, directly representing the producers, would, he declared, open up wide fields in every line. As it is now, few persons have any real comprehension of the value of California fruit products. In a way the State was robbed of her dues. The greater part of our products, especially our wines, are sold under false labels; and our people would have to find ways of protecting their interests and of gaining for California the credit properly due her. Dr. Hexamer closed with the most generous expressions concerning his personal experiences as a visitor in California.

On behalf of the members of the State Horticultural Society Mr. A. T. Hatch next spoke. He said that Dr. Hexamer was right; that the time had come when united action was essential to the prosperity of the California fruit industry. He had, however, small fears of overproduction. The great consideration was to get our products to market cheap and in good condition. People would take California fruit fast enough, he declared, if it could be gotten to them in good condition and at reasonable prices. The past year was a bad year because people were poor; it was a better year for beans and potatoes than for fruits, olives, almonds and raisins. He had, he said, been making some figures upon prune production, and he had found that if his prune orchard only yielded half its annual crop, he could still make a profit of \$100 per acre at three cents per pound—that was allowing \$37.50 per acre for the expense of cultivating, picking, drying, etc. Mr. Hatch next spoke of the vast improvement made in the dried-fruit product. His first dried apricots were about as attractive in appearance as almond hulls; now apricots as commonly prepared for market are almost a confection. Mr. Hatch assured the visitors that California did not claim to know it all; that she was ready to learn and was constantly learning from other regions, and he gracefully acknowledged our indebtedness to the Eastern States and to the Pomological Society represented by the visitors.

Prof. Allen of San Jose followed, telling the visitors how he destroyed his reputation for veracity some years ago in his native town by telling only half of the truth about California. He advised the Pomologists to be on their guard when they reached home, and that a small fraction of the truth would probably be all their friends would accept.

Others of the visitors—Mr. Miller of Georgia, Mr. Ware of Massachusetts, Mr. Harrison of Ohio, and others—spoke in terms of highest praise of California, and of deep appreciation of the civilities they have experienced at the hands of our people.

When the speech-making was done with, several of the visitors asked questions relative to Californian methods of cultivation, pruning, packing, etc., and were answered in a general talk, in which Messrs. Allen, Ramsey, Lelong, Bancroft and others took part.

Mr. Bancroft displayed a form of tag by which he permanently marked his trees as to variety, age, time of planting, etc., etc. It was of sheet copper, marked with a bodkin and attached to a branch by a wire embedding it in the branch. The method of introducing it, he said, was to bore a small hole in the branch and run the wire into it.

Somebody having asked a question as to what had been done in connection with the Pure Food Show soon to be held in San Francisco, Mr. Lelong replied that there would be a repetition of the cooked-fruit feature of the late convention at Sacramento. The State Board of Horticulture, he said, would pay the bill, and Prof. Allen had consented to superintend the work.

Dr. Hexamer hereupon said that a meeting of the

Farmers' Club (of which he is president) is to be held at New York next month, the subject being California. He generously volunteered to receive and provide in cooked form during the whole of the meeting any fruits which our people would send him. Messrs. Ramsey, Holman and Rixford were appointed a committee to collect and forward fruits to Dr. Hexamer.

President Berckman of the Pomological Society then spoke of the Atlanta (Ga.) Exposition to be opened next September; and volunteered to see to it that a proper display of California fruits be made if the materials were forwarded to him. His invitation was warmly accepted, and at the next meeting arrangements will be made for supplying the fruit.

After some further talk, chiefly of a personal and social character, the meeting adjourned.

The St. Ambrose Apricot.

TO THE EDITOR:—In relation to the St. Ambrose apricot, inquired about by Mr. Burgess in your last issue, we would say that as far as we have noticed this variety, the whiteness around the pit is always present and sulphuring does not obviate it. We have also heard many complaints (in addition to our own experience) of the fruit dropping before maturity. In our opinion, however, one of the worst faults of the St. Ambrose is that the drying ratio is exceedingly heavy; with us it has given the poorest results of any variety we have dried. We do not think the age of the trees has much to do with the troubles mentioned.

S. H. SHELLEY & SON.

San Jose.

FROM ANOTHER GROWER.

TO THE EDITOR:—I have had two trees of the St. Ambrose variety of apricot on my ranch for nine years. I dug one out this winter. The white around the pit is characteristic of the St. Ambrose. I do not like it, and, as to fruiting, it bears now and then. It is not as reliable as the Moorpark, which we have discarded in this vicinity. It also drops more than the Moorpark. It grows immensely large, and to eat out of hand is fine. I would suggest grafting on Blenheim as a first choice and Royal as a second choice, if these varieties do well in your vicinity. I hope others will write about it.

E. A. BONINE.

Lamanda Park, Los Angeles Co.

Irrigated Nursery Trees Again.

TO THE EDITOR:—When I wrote the article published in the *RURAL PRESS* of Dec. 29th, I did not expect to have another word to say on the subject of irrigated fruit trees. I simply expressed my views as others had done, without accusing any one of lack of knowledge or veracity who chose to differ from me. Mr. Coates falls into the error of misquoting me in order to impeach a statement made in regard to the roots of the unirrigated tree. He says: "The statement of Mr. K. that the roots of the unirrigated tree are not found within a foot or more of dry top soil." Instead of "roots" I said *feeders*, which makes this mean quite a different thing.

His comparison of the irrigated tree to a greenhouse plant is erroneous. The tree that is enabled to grow and hold its foliage until the cool weather of autumn, protecting its buds from sunburn and maintaining an active root system that can be taken up with the tree, is certainly not less prepared for transplanting to the orchard than the one that was partially starved during the middle and latter part of summer.

Another objection of Mr. C.'s is the large size of the irrigated tree. Here I beg to differ from him again. As a rule, we find the largest trees grown on the rich, damp bottom lands which he describes, without irrigation. The extraordinary large size of these trees on some of the alluvial soils is unavoidable, except by densely crowding them, which makes a very poor, spindling and almost worthless tree. Notwithstanding this enormous growth, it is principally made in the early part of summer. But, on the other hand, the irrigator does not have to resort to these rich bottom lands, but grows his stock generally on the thinner uplands. The growth is slower and can be regulated somewhat by more or less irrigation and cultivation. Now, it is generally conceded that a tree is better for having been grown in a nursery not richer in soil than that to which it is planted in the orchard. There are good grounds for this belief.

I was somewhat surprised at Mr. C.'s objection to the tree with numerous fibrous roots, on the ground that he could not preserve these fibers in the process of transplanting. I know that it is difficult to properly care for the roots of these trees in the drying north wind and sun, but in justice to the planter it should be done. The tree with fibrous roots destroyed by drying has still an even chance with the one without any. But this drying should not be tolerated. Some trees cannot bear it and survive. All are injured by it. Trees should be properly cared for in taking up, even at the expense of puddling the roots (here the irrigation ditch comes in handy), and covered with a tarpaulin when hauling from the nursery.

When I see a nurseryman? (tree butcher) who will

take out and leave to the drying winds a lot of trees, load them on a wagon like a load of hay, roots all out in the sun and the wind whistling through them as they journey to a distant tree yard, I feel as though there ought to be some society that would take the matter in hand and punish him for cruelty to plant life and for his defrauding the planter.

In conclusion, let me say to Mr. Coates: In your further discussion of this subject give us the reason, and the proof, if you have any, and do not expect all to be taken for granted because you say it "from a practical standpoint."

W. T. KIRKMAN.

Merced, Cal.

THE GARDEN.

Culture and Fertilization of the Onion Crop.

TO THE EDITOR:—According to Prof. C. A. Goessman, the leading constituents of the onion are potash, nitrogen, sulphuric acid and phosphoric acid. A crop of 442 bushels contained: Potassium oxide, 38.51 lbs.; phosphoric acid, 15.80 lbs.; sulphuric acid, 29.81 lbs.; and nitrogen, 48.63 lbs., with smaller quantities of other substances. It is easy to see from this the matters which the plant needs most in the soil. It was formerly supposed to be impracticable to grow this crop in the South the same season from the seed, and hence to this day many people in the South think it is necessary to use the small sets to grow a crop of onions. The fact is that in any section in the United States a better crop can be grown from the seed than from the sets. The points to be observed are to sow at the right time to suit the latitude and climate. In the extreme South this time is in the early fall, or last of September; in the upper South, from central Georgia to Virginia, in January or February; in the Middle and Northern States, as early as the soil can be had in good working condition; and on the Pacific coast, at the beginning of the rainy season. The onion is such a hardy bulb that its needs require a cool season to grow in.

The main cause of the failure to grow onions from the black seed in the South in former years, was that the growers did not realize this and followed the practices of cooler regions, and the hot weather caught the crop in a half-grown state and ripened it off in sets instead of large onions as would have been the case had the seed been sown earlier. Another cause of failure was the use of one-sided fertilizers. The constitution of the onion shows that it uses a large percentage of nitrogen, but it also shows that it needs a large supply of phosphoric acid in the shape of a superphosphate, and an equally liberal supply of potash in a soluble form. Hence the old popularity of hard-wood ashes for this crop in all the large onion-growing sections North, while the Southern growers, generally growing for home use, relied on the nitrogenous manures of the barnyard and got a big growth of tops without a corresponding development of bulbs. Now that the onion crop has gotten to be of such great commercial importance in all sections of the country, a few notes as to its culture and fertilization may not be amiss:

The onion prefers a mellow sandy soil for its best development, and it is just such soils that are most commonly deficient in the food elements it most requires. The onion is peculiar in another respect; the maximum crop is seldom, if ever, grown the year the land is planted in onions, no matter how fertile it may be. It is one of those crops that may be grown year after year on the same land, provided the needs of the plant in the way of fertilizers are well supplied. And as the soils most favorable to the crop have a lower absorptive power than clay soils, the need for heavy annual applications is greater. The analysis we have given shows that no one-sided fertilizer material will fill the bill, but it is evident that the three most generally lacking food elements—nitrogen, phosphoric acid and potassium—must all be present in suitable proportions.

Onions thrive wonderfully on the black, sandy, peaty soil of reclaimed swamps, when the deficiencies of such soils are supplied. Their greatest deficiency is usually potash. They are usually rich in mineral matters. Inexperienced people are often surprised to see that great quantities of fertilizers are used on some of these black lands that look to them so rich, by skilled onion growers. But the skilled growers know that the difference between 200 bushels and 1000 bushels will pay for a liberal use of the fertilizers. A commonly advised dressing is 100 bushels of hard-wood ashes per acre, but there are few growers who can get these. Those growers who are not favored with the large vegetable accumulations in their soil that the black sandy swamp soils have, can increase the supply by plowing under some crop that can be grown after the onion is off. In the South the cow pea is admirably suited for this purpose. These buried crops lessen the necessity for purchased nitrogen. The phosphoric acid needed by the onion crop can best be supplied by a superphosphate made from raw bones dissolved in sulphuric acid. The potash which the analysis shows to be so important to the crop can best be supplied in the concentrated form of the sulphate of potash. The low-priced Kainit or other crude potash salt will give too great a percentage of chloride sodium, harmful to the plant, which contains a very minute

percentage of sodium, and this rather accidental than needed, there being only about one pound of sodium in 412 bushels. The following will be found a good formula for an onion fertilizer: Fish scrap, 700 lbs.; nitrate soda, 300 lbs.; dissolved bone, 600 lbs.; sulphate potash, 400 lbs.

This makes one ton, and applied at the rate of half a ton annually will, with the necessary clean culture, give maximum crops on suitable land. The fertilizer should be applied in a furrow, and the furrow then covered by lapping two furrows over the first. The ridge thus made is then rolled nearly flat and the seed sown on the flattened ridge. This puts them right over the fertilizer, and the slight elevation makes the first weeding easier. The subsequent culture must be shallow but frequent, and when the bulbs begin to swell, the soil must be scraped away so as to let the bulb form on the surface.

W. F. MASSEY.

THE POULTRY YARD.

A Large Poultry Enterprise.

Poultry and eggs to the value of \$2,500,000 are consumed by the people of San Francisco each year. Strange as it may seem, two-thirds of this consumption, as to quantity, is supplied from the East, chiefly from Kansas, Nebraska and Missouri.

Think of it! A million dollars going out of the State annually for what might and should be profitably produced at home! And San Francisco is by no means the only place in California consuming Eastern eggs and poultry. Every city and large town in the State contributes to the revenues of Eastern producers of the same commodities.

It is safe to say that the extent of this ridiculous contribution of California to Eastern producers is not less than \$2,000,000 a year. This, at least, is the estimate of an Eastern expert who has carefully investigated the subject, with a keen eye to the possibilities of the situation. He has spent six weeks in this part of the State, has looked over the field thoroughly, and has decided to establish in California the largest and best equipped poultry plant to be found west of Chicago. He will invest from \$15,000 to \$20,000 in the business, and expects to realize a handsome profit from his enterprise. He is no visionary amateur, but one of the most practical and successful of Eastern poultry men, with five years' experience as a breeder.

It is highly interesting and instructive to hear this gentleman talk of the poultry business as now conducted in many large establishments on the Atlantic coast. His name is J. A. Finch, and he is proprietor of the "Terrace Lawn Poultry Plant" at Tacoma Park, Washington, D. C. He has been pursuing his inquiries very quietly in California, and it was by mere accident the other day that a newspaper man learned of his plans. But when hunted down, and asked for information, Mr. Finch obligingly communicated his views on the subject of poultry raising in California and gave some particulars of his own enterprise, which will soon be under way in the neighborhood of Santa Rosa or elsewhere in Sonoma county.

This Eastern poultry raiser dresses well and has the appearance of a prosperous business or professional man. He is in fact a business man by training, and is a member of the Common Council of Tacoma Park, the suburb of Washington in which he resides.

"I sneaked into the poultry business," said he, with a smile, while chatting about his experience. "In traveling about I noticed that some men who had studied it up thoroughly were making a profitable business of it, on scientific principles, and so I set to work to learn it. My health was getting bad, and I needed a change of occupation. But I had an idea, as most people have, that raising chickens by incubators is rather a hobby than a business, and that it is seldom lucrative when engaged in on a large scale with elaborate appliances and much outlay of money. That's all a mistake. No other occupation needs more skill and more careful study; but for those who understand it, and are willing to give their entire time and attention to it, the business of supplying the markets with poultry and eggs is one of the most profitable that can be followed.

"In California, particularly, the inducements are exceptionally favorable. Do you know that the prices paid for eggs here this season are about twice what the Eastern producers obtain? No wonder that Eastern men are shipping eggs in here at the rate of a carload a day and that two or three carloads of Eastern poultry are received here each week. Even with high rates of freight, it pays to ship these products all the way from Kansas City or Omaha. This city alone consumes 2000 head of poultry a day and also about 14,000 dozen eggs daily. Every egg and every chicken that your people eat ought to be produced in this neighborhood. But it will be years yet before the local market can be supplied from the home production, and there is practically no danger of overproduction.

"Let me say right here that no one should undertake the poultry business on a large scale until he has had experience in it in a small way. I thought I knew all about it when I started in at Washington,

but I lost \$3000 the first year. Since then I have made money at it each year. My plant there is one of the most perfect of its kind, but is on a comparatively modest scale. It is nothing to the great poultry plant of Dr. Green, on Long Island, Lake Winnebago, New Hampshire. He has \$120,000 invested in the business, and \$115,000 of it represents the accumulated returns from an original investment of about \$5000. He has 15,000 laying hens, 4000 laying ducks and thirty incubators of 600-egg capacity each. The annual product of chickens and ducks is from \$120,000 to \$140,000, and the buildings and yards are very extensive.

"Governor Morton of New York has \$60,000 invested in the poultry business, and Havenmeyer—the sugar king—is another large producer of poultry. They both find it a profitable as well as an interesting business. There are dozens of other large plants scattered through the East. The business has been reduced to a fine system, and has been rid of the unpleasant features that characterize the ordinary slipshod methods in vogue among farmers and others who have not studied it up thoroughly.

"I have contributed a little to poultry journals, and some of my articles brought me inquiries from California about roup and other troubles that your chicken raisers complain of. These queries led me to wonder why it was that this State imported such large quantities of eggs and poultry, and I determined to come out here and investigate. Many people here think the climate is at fault, but that is not the case. The California climate, on the whole, is favorable—more favorable than that of the Atlantic States or the prairie States. The great trouble here is that the birds are not protected against fogs and other bad weather. In most cases they are either not housed at all or else huddled together with no provision for proper ventilation, and with neglect of cleanliness. No wonder that chills and other sickness carry off thousands of fowls, and that the producing capacity of the survivors is greatly checked.

"When I tell you that an annual production of 200 eggs a year from each mature hen is practicable, you may think it an exaggeration, but such results are actually realized by the most expert poultrymen. I have one hen that has laid 250 eggs in a year, but that of course is exceptional. To reach the highest laying capacity the most skillful breeding is necessary, as well as the best of care and the most scientific feeding. The expert poultryman studies the chemistry of food, and ascertains the proportions of nitrogen and other elements to be fed, according to the object in view. It makes a difference whether eggs are desired, or merely rapid growth of the young birds for market. The season and the nature of the breed must also be carefully considered. There are some fine points of the business that each expert is disposed to keep to himself, as in these lies his advantage over competitors in the same line. And yet one might tell all he knows to any beginner, and the new hand would make a mess of it at first. Many persons would never succeed in this sort of enterprise; that is, in getting the best results, or even a fair profit on the investment, if considerable money were embarked. One must be very observant, and there are many things that nothing but actual experience can teach. Now I can safely branch out, as I have felt my way along carefully.

"You often hear it said that poultry cannot safely be raised on a large scale in California or elsewhere; that some mysterious epidemic takes hold of a big flock and lays them all out cold in short order. No doubt many such failures are had, but that is the fault of the producer and not of the business. The risks are reduced to a small percentage under good management and requisite skill and experience. The capacity of my plant in California will be 30,000 broilers and 2,000,000 eggs a year, but it will take three years to bring the stock up to the full capacity. The annual product will be worth from \$30,000 to \$40,000.

"A well managed poultry plant is run with as much system and order as any factory. Everything is regulated on scientific principles. My new hatching establishment will be a building within a building. The temperature within the outer structure will be maintained at seventy-six to ninety degrees. This will greatly help the regulation of the temperature in the inner house, where the incubators will be placed. They will have a productive capacity of 200 chickens a day. I expect to hatch ninety per cent of the eggs incubated, but fifty per cent is commonly considered a fair average. The difference is due to the exercise of the highest care and skill, and the use of the most perfect apparatus. The temperature of the incubators is automatically adjusted, and a system of thermostats connects with an electric annunciator in the office, so that any variation of the proper temperature of 102°, to the extent of half a degree, is automatically signalled by the ringing of a bell.

"From the time the chicks leave the shell until they are ready for market as broilers, or reach maturity as layers, they are most carefully watched and tended. Each day in the life of the young chick finds it moved a stage farther from the temperature of the incubator. There is no possibility of chill or of trouble from vermin, under proper management.

And the chicks find themselves roosting before they know it, by an ingenious system of progression from the crouching stage. As a beginner I lost hundreds and thousands of chicks before I learned to interpret their language. Their wants are easily understood by the tone of their peeping. It indicates either hunger, thirst, cold or excessive heat, as the case may be.

"The laying hens are managed with like care. They are never allowed to leave the shelter of their pens for the open air when there is too much moisture or cold. They have covered runs for exercise indoors, when the weather is unfavorable. My pens accommodate thirty birds each, with an ample allowance for air space. The egg production of each pen is daily registered in a book kept for the purpose, and if it falls below the proper average I at once proceed to find the reason. I can tell in a moment by the appearance of a hen's comb and her actions whether she is laying or not, and on the first sign of sickness the ailing bird is promptly removed to the hospital. In this way the development of any epidemic is checked at the start. The floor of the laying and roosting places is either of wood or cement, and is carefully swept every morning, and the whitewash brush is also used freely each day. The feed is carefully regulated, and there is a constant supply of fresh water."

Mr. Finch has an elaborate set of drawings, showing the interior arrangements and devices, as well as the external appearance, of the plant he will shortly set up within a convenient distance from San Francisco, and yet sufficiently far away from our heavy fogs and chilly winds.

Treatment of Swelled Head.

TO THE EDITOR:—Seeing Mr. H. F. Whitman's name in the PACIFIC RURAL PRESS signed to an article on the care of young chicks, which I think is good, I will take the liberty of asking if he knows how to cure the swelled head. It first comes in one eye. It is terribly hard to do anything with. Last spring I lost over a hundred. I use strong bluestone water, and sometimes it helps a little. Thinking maybe Mr. Whitman knows something better I ask his experience. E. F. S. Bradley, Monterey Co., Cal.

RESPONSE BY MR. WHITMAN.

If your houses are kept *dry and clean*, and there are no *cracks* where a draft can blow on the birds, and if they are not exposed to the wind when out of doors, you will find the following about as effective as anything you can do for them: Dilute about fifteen drops of pure carbolic acid in one pint of water. Into this mixture dip their heads, once a day if taken in time; twice a day in severe cases. Clean out their nostrils and the roof of their mouth with this same mixture and a feather. You must squeeze the nostrils and in that way get rid of some of the matter. With this treatment we also give a dose, to be taken internally, composed of the following ingredients: One lump of asafoetida about the size of a hen's egg, dissolved in a quart of boiling water; into this stir a tablespoonful of black pepper. Give one teaspoonful of this mixture every day. H. F. WHITMAN. Alameda.

TRACK AND FARM.

Better Tone in the Horse Market.

Last week's receipts in Chicago, says the *Prairie Farmer*, will more than double the arrivals of the week before, but the tone of the market has been generally firm and encouraging throughout. A number of foreign buyers are present, who stimulate the market for good chunks and general-purpose horses, and are sharp competitors for all good, big drivers and high-class coachers. The local demand for such classes also shows some improvement. Good drafters sell readily at the late advance, and rugged workers are meeting with better demand. Small horses, badly blemished stock, and coarse plugs, with no claim to quality, alone sell with difficulty at low and unsatisfactory prices. One of the largest horse commission firms in the trade in review of the market says: "The strength injected into the market in consequence of the very light receipts last week was more than maintained this week, and that, too, in the face of liberal receipts. A considerable trade, both at auction and private sale, was done the first day of the new year, and the bidding at auction was much more prompt than of late. Prices were at least firm at recent advance. Draft horses were in good demand and stronger \$10 to \$15 per head than late quotations. Chunks were firm, while chancey actors were very strong and correspondingly scarce. Prospects for an improved general market are better than they have been for two years." Late sales indicate the following scale of prices in Chicago: Plugs and common workers and unbroken Western horses, \$10 to \$30; light chunks for the Southern trade, \$35 to \$55; streeters and light drivers, \$45 to \$70; good to choice chunks and drafters, \$85 to \$115; general-purpose horses, \$65 to \$100; express horses, \$130 to \$175; good to choice draft teams, \$200 to \$375; fair to good single roadsters, \$75 to \$125; speedy actors and gentlemen's drivers and saddlers, \$140 to \$250; common to good driving teams, \$175 to \$325; and choice to extra carriage and coach teams, \$350 to \$750.

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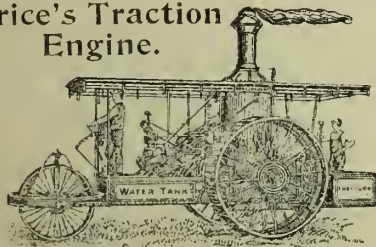
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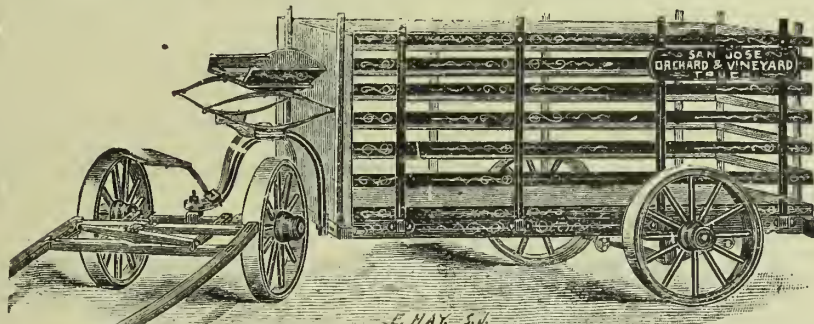
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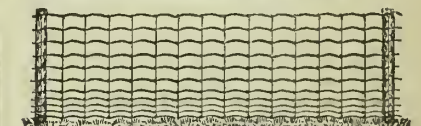
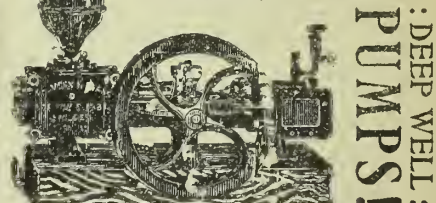
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THE HOME CIRCLE.

My Sweetheart.

As I walked along the highway—
The highway of life, I mean,—
I met one heart that was beating
Ever pure and true and clean.

'Twas the holy heart of a woman,
Good and strong and brave,
And from every care and trouble,
I longed so this soul to save.

But somehow in trying to do it,
I didn't succeed at all;
'Twas she, all the time, who was helping
And keeping me from a fall.

But just the way she succeeded,
I never could quite tell,
For her work was done in silence,
And she did it, oh, so well!

Who do you think was this woman,
That has always loved so true,
And kept me from harm and trouble?
Why, mother dear! it was you!

R. D.

Chased By Fire.

It was a gloomy day in November. The wind rushed over a Dakota prairie, causing the tangled masses of long grass with which it was carpeted to wave to and fro like the coming in or going out of the ocean tide. Everything was brown and withered, and the sod houses scattered at wide intervals fitted well in the somber picture. There were patches of bare ground here and there, with piles of dead "tumbling weeds" broken from their main stem and clinging together, rolling over miles of space, the playthings of the wind, and increasing in size as they rolled.

A young girl stood in the doorway of a small dugout and looked at these with a troubled countenance.

"It would be a terrible day for a fire," she said to the lad who was twisting the hay for their fuel a few yards away. "Everything is so dry, and those weeds are collecting in such quantities that there would be a moving wall of flames if lighted."

"Well," said the boy, hopefully, "it's getting late in the season for fires, and Jack Williams plowed a half dozen extra furrows around our house for a safety line. If the wind keeps on tearing like this, we'll get rain or snow soon, and that will put an end to all anxiety. Ugh! what's that?"

There was an echo of horse's hoofs from the rear of the house, and an Indian came around the corner mounted on a white-faced pony, with a blanket dragging loosely from his shoulders. The girl stepped back, and the boy dropped his hay and came near her as if to offer her some protection.

"White Bear comes!" said the red man, with a pompous air, laying his hand upon his chest as he spoke. "Big Sioux—much big—wants flour, meal, salt pork!"

For a moment Alice Maxon was frightened, but a glance at her brother Elmer seemed to give her strength, and she answered, firmly:

"We have no food for you, White Bear. The year has been a hard one for us. See our little farm, our one cow and horse, and our poor clothes. We are only children. I am eighteen and my brother is twelve. Our father and mother are dead, a long, cold winter lies before us, and we have not a mouthful to spare."

The Indian frowned.

"White Bear must have flour and meat from all the settlers of Ridge Prairie! Does the one cow give milk? White Bear must have butter. Has the maiden chickens? White Bear must have eggs. I have said it."

"You will get nothing here," said Elmer Maxon, angrily. "If you want these things, do as we have done; work for them like a good citizen of the United States!"

"Does the maiden say this, too?"

"I do not like to turn you away empty-handed," Alice returned, in a gentle voice, "but I cannot give you from our store of provisions. A great warrior will not be cruel, and if I offer to break bread with you, will not White Bear eat one slice and go in peace?"

"No!" growled the savage. "White Bear will have what he asks or nothing!"

And if I get nothing the bad children will be sorry; they will know what it is to be hungry and cold before spring!"

Alice turned away, unable to meet the stare of his revengeful eyes; but Elmer answered, dauntlessly:

"We are not afraid of you. There are too many settlers about Ridge Prairie for any of your treacherous plots to succeed, and I don't believe you are even a big Sioux. Brave chiefs do not beg or try to scare boys and girls, either!"

"We shall see!" said White Bear, in a guttural voice.

He struck his pony with a piece of shingle that he held in his left hand, and rode away without looking back; but Alice and Elmer watched him out of sight with some uneasiness.

"I am sorry for this," said the girl, "but, indeed, I cannot help it. To give to one Indian is to open the door through which twenty more will file into your castle. And, Elmer, we cannot spare anything from our winter's allowance without putting ourselves in danger of starvation."

"Are you afraid of White Bear?" the boy asked.

"I am a little troubled by his threats," said his sister.

"Well, I believe I had better go up to Jack-Williams' cabin and tell him about it—and see what he thinks we should do to protect ourselves."

Alice blushed prettily.

"We are always appealing to Jack Williams for help," she said, deprecatingly. "I am afraid he thinks we are very troublesome."

"No, he doesn't, Alice! Only yesterday he charged me if anything happened to you to let him know at once, and he is always offering to help us, as if it was the pleasantest and most natural thing in the world."

"He is very kind," and Alice Maxon's face grew still more rosy. "Perhaps it would be well to consult him, and you should lose no time in going, Elmer, for you must get back before it gets dark."

Elmer did not wait for a second bidding, but mounted the only horse they possessed and rode away toward the Williams homestead.

The two buildings were, in pioneer phrase, "handy to each other," being only a mile apart; and when the boy reached Jack's home he found that sturdy fellow on his knees in front of the cabin, oiling and polishing his bicycle with industrious care.

"Helloa, Elmer!" he called out, cheerily, "I was just getting ready for a flying trip to your house. I have been to Sherwood, and as to-morrow happens to be your sister's birthday, I bought her a little present which I was going to bring her over on my wheel."

Elmer was alive with interest now, and White Bear was forgotten till after Jack had brought from the kitchen table a handsome plush toilet case carefully wrapped in several papers.

"Isn't that a daisy!" the young man cried, warmly. "I can imagine how Alice's blue eyes will shine when she sees it."

"Didn't it cost a mint of money?" the boy asked, reproachfully.

"Only five dollars, Elmer. I will own that to be a good sum for a Dakota farmer to spend on a thing of beauty; but it is my first gift to your sister, and nothing seems too extravagant for Alice."

Miss Williams, Jack's old maid sister and housekeeper, looked up from her sewing and smiled shrewdly at this transparent speech; but Elmer saw nothing significant in it, and went on with his errand in a rapid way.

Jack's brow clouded in a moment.

"The impudent beggar!" he exclaimed, angrily. "That is the way of those cowardly redskins, to threaten women and children."

Miss Williams shook her head gravely.

"I am afraid he will carry out his threat. Indians are so vindictive. I wish Alice would break up housekeeping and spend the winter with us."

A cry from Elmer brought the others quickly to the door. Beyond the dugout of the Maxons a puff of smoke was ascending toward the sky, and the wind was behind it, blowing a

gale. Jack caught the situation in an instant.

"Sarah," he cried, excitedly. "White Bear's work has begun. We are all in the pathway of that fire, and it will strike Alice first!"

"But there is a plowed safety-line about the house," said Miss Williams.

"Of no more value than a tow string when those masses of burning, tumbling weeds from Ogden's breaking are swept along by the wind! Can you and Elmer set a head fire beyond our house and meet this with wet brooms and blankets when it comes, while I go for Alice on my wheel?"

"Yes," replied the determined woman. "We can save this place, I think, but I do not think you can bring Alice on the bicycle."

"Trust me for that!" said Jack, mounting hurriedly. "She is as light as a feather and brave enough to keep her balance. I can ride ahead of an ordinary prairie fire, and," he added, under his breath as he spun out over the trail, "if I cannot save her, we can die together!"

Sarah Williams lost no time in making those efficient preparations for a battle with fire that are so familiar to the Western pioneer, and as Jack looked back over his shoulder he saw the head line of a fiery flame rushing away from his house, and he knew that when the advancing forces came up they would find the cool-headed woman and boy ready to meet them.

He could see the blaze rising above the smoke behind the Maxon buildings, and knew it was coming with awful speed. A few rods from the door of the house he met Alice, running in frantic haste.

"Quick! Quick!" he shouted, as he circled about and turned toward his own claim. "Come with me and I can save you—the place must go!"

She grasped his strong hand, sprang up to the support of his arm, and, doubly freighted, the light, steel-forged vehicle started on its return.

There have been many novel races in the world, but never another like this. Love and fear, life and death.

courage and calmness were all in the balance, and a straw might determine the result. Crackling and hissing behind them was a wall of fire; clouds of thick smoke rushed about them, and sickening heat seemed to swallow up sight and hearing; but still Jack's feet steadily guided the pedals, still he held the precious burden against his breast, and on they flew before the wind. Once, when he felt his muscles quivering under the strain, he whispered hoarsely in the girl's ear:

"Alice, I love you! Living or dead, we will never be separated!" And Alice whispered, "Never!"

Then with new strength he pumped on and found himself on black soil. A few revolutions more and he was in the midst of his own safety furrows, with a huge mass of burning weeds closely pursuing him, which was shattered and thrown back by two pitchforks in the hands of Sarah and Elmer. Then they all rallied and assailed the fiery enemy as it came up in roaring lines, beating it down and giving exultant cheers at its sullen death.

An hour afterward, a smoky, grimy faced couple with watery eyes and very dirty hands, stood before Miss Sarah Williams and confessed that they were engaged.

"When did it happen?" she asked, with a curious twinkle in her red eyes, and Jack promptly answered:

"Ask our bicycle!"—Waverly Magazine.

Dyspepsia and Baldness.

Dyspepsia is one of most common causes of baldness. Nature is a great economizer, and when the nutrient elements furnished by the blood are insufficient to properly support the whole body, she cuts off the supply to parts the least vital, like the hair and nails, that the heart, lungs and other vital organs may be the better nourished. In cases of severe fevers this economy is particularly noticeable. A single hair is a sort of history of the physical condition of an individual during the time it has been growing, if one could

From

High Government Authority.

No authority of greater experience on food products exists than Dr. Henry A. Mott, of New York. Dr. Mott's wide experience as Government Chemist for the Indian Department, gave him exceptional opportunities to acquaint himself with the qualities and constituent parts of baking powders. He understands thoroughly the comparative value of every brand in the market, and has from time to time expressed his opinion thereof. On a recent careful re-examination and analysis he finds

Dr. Price's Cream Baking Powder

superior to all others in strength, purity, and efficiency. Dr. Mott writes:—

"New York, March 20th, 1894.

I find Dr. Price's Cream Baking Powder to be superior to all others, for the following reasons:—

1st. It liberates the greatest amount of leavening gas and is consequently more efficient.

2nd. The ingredients used in its preparation are of the purest character.

3rd. Its keeping qualities are excellent.

4th. On account of the purity of the materials and their relative proportions, Dr. Price's Cream Baking Powder must be considered the *acme of perfection* as regards wholesomeness and efficiency, and I say this having in mind certificates I have given several years ago respecting two other baking powders.

The reasons for the change in my opinion are based on the above facts and the new method adopted to prevent your baking powder from caking and deteriorating in strength.

HENRY A. MOTT, Ph. D., L. L. D."

read closely enough. Take a hair from the beard or from the head and scrutinize it, and you will see that it shows some attenuated places, indicating that at some period of its growth the blood supply was deficient from overwork, anxiety or under feeding.

The hair falls out when the strength of its roots is insufficient to sustain its weight any longer, and a new hair will take its place unless the root is diseased. For this reason each person has a certain definite length of hair. When the hair begins to split or fall out massage to the scalp is excellent. Place the tips of the fingers firmly upon the scalp and then vibrate or move the scalp while holding the pressure steadily. This will stimulate the blood vessels underneath and bring about better nourishment of the hair. A brush of unevenly-tufted bristles is also excellent to use upon the scalp, not the hair.—Hall's Journal of Health.

A True Ghost Story.

About a mile beyond the Beech Hill stood Squire Macdonald's store, and one dreary night in late autumn there came thither first Rory O'More, and then Sandy Big John, and finally Alec Gillies, all in a high state of excitement, and asserting with much positiveness that they had seen the ghost on Beech Hill. Now, the squire was as shrewd, hard-hearted, and unsuperstitious a Scotchman as ever traded tea for butter or sugar for eggs, and he had no more faith in the Beech Hill ghost than the man in the moon.

But this time the testimony of the terrified witnesses happened to agree remarkably. The ghost had appeared to all in precisely the same form, namely, as a white, shapeless thing that rolled along the ground, uttering shrill and threatening shrieks. The matter was surely worth looking into. "Hark ye, now," said the squire at last, "I believe you're nothing better than a parcel of foolish boys; and to prove it, I'll go up to the Beech Hill myself and see what it is that has come so nigh scaring the life out of you."

Thus speaking, he got his coat and hat, and calling them to follow, set off for the scene of the ghost's walk. Rory and Sandy and Alec would much rather have been excused, but pride overcame their timidity, and they followed in their leader's track. Hardly had they reached the foot of the hill than the shrieks they had heard before came to their ears.

"There it is again!" exclaimed Rory, with trembling lips, "Can ye hear it, squire?"

"To be sure I can!" responded the squire, stoutly; "and I'm going to see what it is. Come along."

The distance between the doughty squire and his followers increased as he went on, while the shrieks grew stronger with each forward step.

When about the middle of the ascent he saw the ghost. It was, as the men reported, a white shapeless thing rolling upon the ground; and from it undoubtedly came the piercing cries which had proved so alarming. Going straight up to the thing, the squire touched it with his foot, then bent down to feel it with his hand, and then burst out into a roar of laughter that at first startled the three farmers almost as much as the ghost shrieks.

"Come hear, you fools!" he shouted. "Come and see what your ghost is."

In a hesitating way they drew near, and examined the cause of their affright. It was a white meal bag containing two very lively young pigs, which had in some way fallen off a farmer's wagon into the middle of the road, there to prove a source of terror to the superstitious and perhaps not altogether sober passers by.—Harper's Young People.

Ten Miles Above the Earth.

The greatest height ever attained by balloonists who have returned alive to relate the story of their experience was 37,000 feet—upward of seven miles; this by Glaisher and Coxwell. They left Wolverhampton, England, at 2:30 p. m., September 5, 1892, and during

the afternoon reached the enormous altitude recorded above. Balloons have been sent to a greater height than that attained by the Glaisher-Coxwell airship, but they were not accompanied by aeronauts. In the experiments made by Hermite and Besancon at Paris they sent balloons to a height of ten miles. Each balloon was fitted with self-recording instruments. They showed that the temperature at seven and one-half miles was 60° below Fahrenheit's zero, and that the barometer marked only four inches.

Fashion Notes.

Some of the latest evening gowns are minus the sleeve entirely, having only a little strap affair to hold them on the shoulders. This is, indeed, a jump from the immense balloons.

Chinchilla is one of the season's favorites and for the woman with a clear pink-and-white complexion there can be nothing prettier. A beautiful evening cloak is made of dark green bengaline, with a lining and full cape of chinchilla.

The bodice that fastens invisibly under the arm and on the left shoulder is a great favorite, and adds much to the bringing out of a good figure. It is impossible to fasten it one's self. But when once it is fastened, the wearer enjoys the proud distinction of looking as if she had been melted and poured in.

In making over last year's evening dress a successful effect may be produced by using the old sleeves for the waist and the old skirt for the sleeves, in which event the skirt will have to be of a different material altogether. For young girls white accordion-plaited crepe skirts are very useful, as they may be worn with any bodice, and for any small function are just the thing.

"How to be pretty though cold" is a difficult problem for the unfortunate woman who cannot afford furs of some description in this season, when fur garment are made so fascinatingly becoming, with their wide, soft collars, and so expensive in their exaggerated fulness. Seal-skin is the one fur which is continually in fashion, and it is so distinctly becoming to every face and complexion that it will never lose its popularity. It is not quite so aristocratic as the gray-haired Russian sable, but that is a matter of rarity and price, rather than a question of beauty.

Gems.

The secret of most men's misery is that they are trying to please themselves.—Maurice.

Happy men are full of the present, for its beauty suffices them; and wise men also, for its duties engage them.—Carlyle.

It is easy to live in the world after the world's opinion. It is easy to live in solitude after our own. But the great man is he who, in the midst of the crowd, keeps with perfect sweetness the independence of character.—Emerson.

Silence is strength. Silence baffles, protects, protests. Silence unhouses hate, defeats malice, disarms wrong. Silence is tempered steel. Only the strong can use this weapon: few can draw the bow of Ulysses.—Francis Melville.

Learn a wondrous secret—that penilessness is not poverty, and ownership is not possession; that to be without is not always to lack, and to reach is not to attain; and the light is for all eyes that look up, and color for those who "choose."—Helen Hunt.

It is the pure in heart who see God clearly. Trifle with the adjustment of a field glass, and the picture becomes blurred. And just so far as we trifle with the spiritual laws of life, just so far as we live lives of self-indulgence and have no higher ideal than self-display, our eyes have become so blinded that we can no longer see clearly where to put our faith when the storms come. The greatest faith is always found with the highest living.—Minot Osgood Simons.

DOMESTIC ECONOMY.

Mother's Cooking.

Your modern school of cookery,
Where food is done by rote,
Don't hardly touch old mother's food,
Although she cooked by rote.

She had a way of cooking things,
So wholesome and so sweet,
That vittles seemed to coax us boys
To take right hold and eat.

This shariotte roosh is fraud in cake,
And French a-claims don't "stay,"
And lemon pie with lather on't it
Is jest like medder hay.

In spite of all your folderols,
The old folks often sigh
For mother's "dish"—she called it "b'iled"—
And mother's pumkin pie.

But p'raps it warn't all cookery
That made the vittles grand,
Maybe the heft of sweetness lay
In dear old mother's hand.

Don't matter much what vittles is
When love is served for sarce.
Love turns old hens to chickens, br'iled,
Nettles to sparrer grass.

Hints to Housekeepers.

Love lightens labor, and quiet, loving tones make a happy home.

Make pie crust with a little baking powder sifted in the flour, and use less shortening. You will find it much more digestible, and better for all fruit pies.

A child's bed should always be placed so that the light shall come from one side. If it be allowed to strike in front or behind the head it would have a tendency to make the child cross-eyed.

All woolen dresses should be hung out in the air and sunshine at least once in a fortnight. This will not only render them fresh and sweet, but it will also take out creases as nothing else except a tailor's iron will.

A woman noted for the frothy lightness of the mashed potato served at her board confesses to no secret in its preparation, "except, perhaps, the pinch of baking powder, which I add along with the little milk and butter that everybody puts in." She has the mixture beaten hard and fast with a fork, and one or all of these things contributes to a most successful whole.

Never cut or trim the eyebrows. Their beauty includes delicacy—delicacy in curve, width and texture. Trimming them destroys this by causing them to grow coarse, stiff and "wild." To get the well-defined, narrow arch many beauties pinch the eyebrows after anointing them with oil to make the

hair look glossy. A stray, wiry or gray hair may be removed with a tweezers, but should never be cut. On the other hand, eyelashes are cultivated by clipping them once a year. Hair dressers call it "topping" them, and the term is pertinent. Only the irregular tip ends should be cut, and this can only be done by another. Cutting the lashes weakens the eyes, remember that!

For the Kitchen

SOUR CREAM SAUCE.—Put together a cup of sugar and a cup and a half of thick, sour cream. Beat the mixture five or six minutes, then put it into a sauce tureen and grate nutmeg over it. This sauce is specially appropriate for Indian puddings, boiled or baked, and for boiled suet pudding.

TO BOIL EGGS.—Put them in a saucepan, and pour boiling water over them, cover the dish tight and set back where the water will keep hot, but not boil. Let it stand ten minutes. The effect is quite different from that produced by boiling, both the flavor and texture of the egg being vastly superior to an egg boiled in the usual manner.

ROXBURY PANCAKES (FOR BREAKFAST).—One pint of sour milk, one egg, three cups of rye meal, one of Indian, half a cup of molasses, one small teaspoonful of soda and one of salt. Fry like doughnuts. Take a tablespoonful of the mixture, and, holding it low over the fat, scrape it out with a knife in such a way as to give it a round shape. Stir and shake them about constantly.

MINCED VEAL.—Put the bones of a cold fillet or loin of veal, or any other bones you may have, into a stewpan with the skin and trimmings of the meat. Dredge in a little flour, pour in more than a pint of water, a small onion, sliced, one-half teaspoonful of minced lemon peel, a little mace, if the flavor is liked, a bouquet of sweet herbs, white pepper and salt to taste. Simmer these ingredients for more than an hour, then strain the gravy and thicken it with an ounce of butter rolled in flour; boil it up again and skim well. While the gravy is cooking, mince the veal, but not too fine. When the gravy is ready put it in and warm it gradually; add a teaspoonful of lemon juice and three tablespoonfuls of milk or cream if you can afford it. Do not let it boil. Pile the mince in the center of the dish, and garnish with sippets of toasted bread and points of lemon. Place three nicely-poached eggs on top, and you will have a very pretty as well as nice dish for the table.



HOUSEKEEPERS who are wise will not be persuaded into the purchase of the unreliable baking powders which some dealers wish to sell for the sake of the additional profit derived therefrom. Crudely mixed from low-grade, impure ingredients, such powders cost but half as much to make as the highly refined, absolutely pure Royal Baking Powder, although retailed at the same price. They are unwholesome and lacking in leavening strength.

Royal Baking Powder gives the greatest value for its cost, and there is no other powder or preparation that will give such satisfaction, or make such pure, wholesome and delicious food, or which in practical use will be found so economical.

FLORIST AND GARDENER.

Questions for Southern Readers.

To THE EDITOR:—Kindly ask your southern California readers to answer thorough your paper the following questions:

Is the African box thorn (*Lycium horridum*) a good fence for a dry climate (San Diego county, near the sea). If so, how should it be planted to turn cattle, distance apart of the seed, and width of hedge? Is there danger of its spreading to arable pasture land through seeds or roots? If not, what plant is there for hedges which will turn cattle, grow quickly in a dry climate near the sea, can be planted from seed in place, along a fence or where a fence is needed, but where distance to be covered and expense of posts forbid wire fence, and which will not spread from seed or root in a way to endanger farm or pasture adjacent to the hedge?

(2.) Is either the *Eucalyptus crebra* or *Marginata* suitable for a dry sea-coast climate, if grown on side hills? Which is best? In such a situation, which of the following would thrive best: *E. Bicolor*, *Corymocalyc*, *Fossilis*, *Leucocorylon*, *Meliodora*, *Pilularis*, *Polyanthema*, *Rostrata*, or *Siderophloia*? Is there any variety less durable but better suited for such dry, exposed, wind-swept land, where by trial the *Globulus* dies, and the *Corymocalyc*, without cultivation, grows too slowly to be worth planting, and is, moreover, eaten by stock and deer?

(3.) Has the pecan been a commercial success in any climate similar to that of San Diego, where the soil is good but rainfall often deficient, and surface water from 60 to 80 feet below the surface?

(4.) What grass or forage plant has experience proved to be best for San Diego county conditions near the sea? Has it been proved that any imported grass or forage plant is superior to the native growth under such conditions? Los Angeles. HACIENDA.

Los Gatos Floral Society.

To THE EDITOR:—The Los Gatos Floral Society held their annual meeting last Thursday, and the following officers were elected for the new year: President, Miss K. B. Holladay; vice-president, Mrs. L. G. Turner; secretary, Mrs. F. A. A. Belinge; treasurer, Miss E. Cohen; accountant, Miss Mabel Rankin; directors, Messrs. J. R. Ryland and T. E. Johns.

The reports of the retiring officers were read, proving that the society was moving onward. The chairman of the Committee on Papers also gave a short report, stating that during the last year nine interesting and instructive papers had been written and read by the members.

The society proposes to hold their usual rose fair in May, and it would be well worth the while of the lovers of the rose to pay Los Gatos a visit at that season, for our lovely valley is God's chosen spot to perfect the queen of Flora's kingdom. K. C. B. Los Gatos, Santa Clara Co.

PACIFIC NURSERY.

Office and Greenhouses: Cor. Baker and Lombard Sts., San Francisco. Nursery at Millbrae, San Mateo Co.

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Prune au Myrobolan, French, German, Bulgarian, Robe de Sargent, Clyman, Tragedy, Fellenburg, St. Catherine, \$8 and \$10 per 100
Apples, leading sorts, \$8 and \$10 per 100
Apricots, the best varieties, \$8 and \$10 per 100
Almonds, the best soft-shell sorts, \$8 and \$10 per 100
Cherries, au Mazzard, \$10 and \$12 per 100
Peaches, best free and cling varieties, \$8 and \$10 per 100
Pears, Bartlett and other sorts, \$10 and \$12 per 100
Roses, two-year-old, field grown, newest and best old varieties, \$20 each, \$15 per 100
Monterey Cypress, Blue and Red Gum, in boxes, transplanted, \$1.25 to \$10, \$10 to \$12.50 to \$1000
Palm California, Japan and Australian Fan Palm, Phoenix (Date Palm), Dracenas, and a large assortment of evergreen trees, deciduous trees and shrubbery, Azaleas, Indica and Mollis, Camellias, Rhododendron, Fuchsias, at low prices. F. LUDEMANN.

FRUIT TREES.

FRENCH PRUNE, BARTLETT PEARS, Apple, Peach, Cherry, Apricot and Almond TREES.

First-Class Trees at very low prices.

E. GILL, Nurseryman, Oakland, Cal.

Seeds, Plants, Etc.

50c. BARGAINS

IN ROSES and PLANTS.

We want your trade, hence we offer these cheap bargains well knowing that once a customer of ours, always ours. Please tell your neighbors about

- Set A—10 Ever-blooming Roses, 10 Colors, 50c
- B—10 Prize Winning Chrysanthemums 50c
- C—10 Lovely Fuchsias, all different, 50c
- D—8 Fragrant Carnation Plugs, 50c
- E—15 Choice Rainbow Fancies, 50c
- F—12 Sweet Scented double Tube Roses, 50c
- G—10 Elegant Geraniums, all different 50c
- H—8 Flowering Begonias, choice kinds 50c
- J—10 Vines and Plants, suitable for Vases and Baskets, 50c
- K—12 Magnificent Coleus, bright colors 50c
- L—4 Choice Decorative Palms, elegant 50c
- M—4 Dwarf Ever-blooming Fr. Canna 50c
- N—20 Packets Flower Seeds, all kinds 50c

NO TWO ALIKE IN THESE SETS.

Any 3 sets for \$1.25, any 5 for \$2. By mail postpaid, safe arrival and satisfaction guaranteed. Order by the letters from this advertisement now as these introductory sets not in catalogue. This book contains everything you need for the garden and house. We mail it for 10c. In stamps. We are the largest rose growers in the world. Over one and a half million roses sold each year.

The COOD & REESE CO.,
Champion City Greenhouses,
Box 148 SPRINGFIELD, OHIO.

The Famous EXTRA EARLY TREE TOMATO

A Perfect Wonder. The Best Tomato in the World and just what everyone wants. Extremely Early, bears abundantly of the finest flavored, bright red tomatoes and is distinguished from all others by its tree form, standing erect and requiring no support at all. No one who has a garden should be without it.

MAY'S MATCHLESS CUCUMBER
A Superb Variety. Enormously productive. Grows about 18 inches long, and is unequalled for slicing.

OUR FAMOUS CREAM LETTUCE
It beats them all. Very crisp and tender. Stands a long time before running to seed.

May's Tomato, Matchless Cucumber, Cream Lettuce, May's 30c. Cerise, and our Illustrated Bargain Catalogue (worth dollars to every buyer) of Seeds, Fruits and Plants, containing Colored Plates, painted from nature, and thousands of illustrations, all for only ten cents.

Mammoth Tomato FREE
To every person sending 10c. for above Tomato Collection and giving us the names and addresses of three or more of their friends who purchase Seeds, Plants or Fruits, we will add, free, one packet of Mammoth Tomato, a magnificent variety of enormous size, often weighing 3 lbs. each. This is the most liberal offer ever made by a reliable Seedman, and no one should fail to take advantage of it.

MAY & CO. Seedmen & Florists, St. Paul, Minn.

May & Co. are perfectly reliable.—E.D.

SANTA ROSA NURSERIES.

Large Stock of Unirrigated Trees on whole Seedling Roots, warranted free from scale and root knot. Prices low. Cherries, Grapes, Nut and Shade Trees very low. All leading varieties. Also, WONDERFUL TENNANT PRUNE; Normand, Abundance, Willard and Simon Plums; Ilungoume Japan Apricots, Early Bearing Apples, and Earliest Yellow Peaches. New Price List Free.

R. W. BELL, SANTA ROSA, CAL.

OAK LAWN NURSERY

First-Class Fruit Trees.

HARRY E. HULBERT, Prop.

Grower and Dealer in

General Nursery Stock.

Salesyard, Cor. Third and Davis Sts.

Please send for Price Lists.

223 Third St., Santa Rosa, Sonoma County, Cal.

THE FINEST STOCK OF

Citrus and Deciduous Trees, BERRIES AND OTHER PLANTS,

In the State, at the Home Nurseries, Pasadena, Cal.

One and two-year-old Orange and Lemon Trees, the finest and thriftiest stock ever grown anywhere, and all the best varieties, also Pomelo (Grape Fruit), and the Japanese Red Dancy Tangerine Orange; also the best deciduous trees, Raspberries, Blackberries and the Wonderful Everbearing and other fine varieties of Strawberries. Nothing but the best of all varieties of Fruits and Nuts. Don't fail to write for prices to HEWITT & CORSON, Props. Pasadena, Cal.

PLUMS!

Plums—tell your people to grow the best plums: they will always find a good market.

So said several of the largest handlers of fruits in Chicago when the question was asked them recently, "What is the most profitable fruit to plant now?"

- Clyman, Burbank, Mikado, Normand, Satsuma, Tragedy, Kelsey, Diamond, Grand Duke, Simon, Ickworth, Pond.

These are the best. Write for prices, which will be made very low.

Also, almost everything else to the Fruit and Nut Tree line. Seeds, Bulbs, Plants, etc.

LEONARD COATES,

Napa Valley Nurseries, NAPA, CAL.

ESTABLISHED 1876

MYROBOLAN NURSERY.

No Irrigation.

Growers of all the Leading Varieties of Fruit Trees.

Correspondence solicited.

JAS. O'NEILL & SON, Haywards, Alameda County, Cal.

James A. Anderson, NURSERYMAN, Lodi, San Joaquin County, Cal.

Has a Choice Stock of YEARLING NURSERY TREES for this season's planting. Guaranteed free from disease and insect pests, and at prices to suit the times.

Hungarian, Royal and French Apricots, Hungarian, Tragedy and French Plums, Burbank, Satsuma and Kelsey Plums, No Plus Ultra, La Prima, Texas Profile, I. X. L., Nonpareil and Languedoc Almonds, Salway, Crawford, Muir and twenty other varieties of Peaches.

Also Nectarines, Apples, Pears, Cherries, Figs, Oranges, Lemons, etc.

Your prices are mine. Don't forget to write for particulars. Correspondence solicited and cheerfully answered. Address all communications, J. A. ANDERSON, Lodi, Cal.

FOR SALE!

50,000

French and Robe de Sargent PRUNE TREES,

AT 6 CTS. EACH OR \$50 PER THOUSAND.

F. N. WOODS,

Box 557 Santa Clara, Cal.

E. J. Bowen, SEED MERCHANT.

Alfalfa, Grass, Clover, Vegetable and Flower Seeds.—Onion Sets.

Largest Stock and Most Complete Assortment.

Send for large illustrated descriptive and priced Catalogue, mailed free.

New crop Salt Lake Alfalfa. Inquire for samples and prices.

Address—

815, 817 and 819 Sansome St., San Francisco, Cal.

65 Front St., Portland, Or.

Or 214 Commercial St., Seattle, Wash.

NURSERY STOCK FOR SALE.

Spark's Mammoth

AND ROYAL APRICOTS and PRUNES.

Prices to Meet the Times.

Before purchasing elsewhere write—

N. B. SMITH, Ventura, Ventura Co., Cal.

Orange Trees!

ONE THOUSAND THREE-YEAR-OLD SEEDLINGS, Florida Sour stock; must be sold. Strongly grown; warranted free from scale. No reasonable offer refused. Write for particulars.

I. B. LACY,

East Oakland P. O. Alameda county, Cal.

ACRE APPLES, \$14.93 Write NURSERIES AND ORCHARDS,

Louisiana, Mo., for free sample copy telling about it. A practical Fruit and Farm paper, published by Stark Bros., 40c a year; circulation, 460,000 copies. The "Cream of the Cream"—gives the busy Fruit Grower or Farmer, who hasn't the time or the money to buy and read a great mass of papers, what is best from them all, what he wants to know.

Walnut Trees.



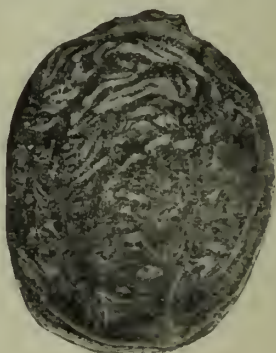
Grenoble or Mayette Walnut.

The most complete collection of Walnuts to be found anywhere: 23 varieties, including the Mayette or Grenoble, Franquette, Parisienne, Chaberte, and Vourey, the leading market walnuts of France, all first grade, second generation seedling trees, the only class of seedlings worth planting, of all the above named varieties, besides Preparturien and Cluster. Also grafted trees.

New Varieties of Prunes!

"Clairac Mammoth" D'Ente!

Or Improved French Prune.



Average Size (Cured).

The finest and largest prune ever introduced into this State, grading (cured) from 2 1/2 to 3 1/2 pounds; splendid to ship East as a plum. This season is the first one that this remarkable prune has been put on the market.

Everything else in the nut and fruit tree line. General Catalogue, with essay on Grafting the Walnut, and how to redeem by grafting large, unproductive and defective walnut trees, with cuts, 10 cts. per copy.

Supplement, with Price List for the season of 1894-95, sent free on application. This supplement contains a full description of the "Clairac Mammoth."

FELIX GILLET,

Barren Hill Nursery, Nevada City, Cal.

You Can Get Ferry's Seeds at your dealers as fresh and fertile as though you got them direct from Ferry's Seed Farms.

FERRY'S SEEDS

are known and planted everywhere, and are always the best. Ferry's Seed Annual for 1895 tells all about them. — Free. D. M. Ferry & Co. Detroit, Mich.

TREES A FINE ASSORTMENT, best varieties, free from pests of any kind. Prunus Simon, Bing, Rostraver and Murdoch Cherries; Black California Figs; Rice Soft Shell and other Almonds; American Sweet Chestnuts; Preparturien Walnuts. Hardy mountain grown Orange Trees. Our oranges have stood 22 degrees this winter without injury. Dollar Strawberry, the best berry for home use or market. Address C. M. SILVA & SON, Lincoln, Placer County, California.

BLUE GUMS! Monterey Cypress!

IN LOTS TO SUIT.

Write for Prices. Delivered on wharf in San Francisco Address W. A. T. STRATTON, Seedsmen & Florist, Petaluma, Cal.

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"THE CALIFORNIA" Mammoth New Violet

FLORAL WONDER OF THE CENTURY

Blooms cover a Silver Dollar. Stems 12 to 14 inches long. Color—clear Violet-Purple.

We gave the Violet its glorious name—"THE CALIFORNIA." We alone have supplied the market with its blooms
And we now offer the **PLANTS** for sale.

PRICES—One, 20 cents; Six, 85 cents; Dozen, \$1.50; Hundred, \$7.50

Plants vigorous and entirely free from Disease.

Our n. w. handsomely illustrated General Catalogue for 1895, now ready, and mailed free.

SUNSET SEED AND PLANT COMPANY, 427-9 Sansome street, San Francisco.

INCORPORATED 1894.

500 ACRES

California Nursery Company,

NILES, CALIFORNIA.

NURSERY STOCK OF ALL KINDS.

Fruit Trees, Nut Trees, Small Fruits, Ornamental Trees
and Shrubs, Palms, Flowering Plants, Etc.

SPECIALTY:—All the Italian, French and Spanish Varieties of Olives of
Note—"True" Spanish Queen, Rubra, Regalis, Etc.

Write us for new Catalogues and Estimates. Prices to suit the times.

JOHN ROCK, : : : : : Manager.

MAMMOTH NEW VIOLET.

1895 Floral Wonder.

THE CALIFORNIA.

Immense in size; stem 12 inches long. Intensely fragrant.
Color Pure Violet Purple.

A STERLING NOVELTY. IT HAS CAPTURED THE SAN FRANCISCO MARKET.
Last year a few thousand flowers were offered in San Francisco,
and they were sold for TEN TIMES THE PRICE of Marie Louise and Russian.
Plant vigorous and absolutely free from disease. Does not fade out. Last season several hundred
flowers were picked from a single plant.
Price of Plants on Application. Descriptive Catalogue of Seeds, Plants and Fruit Trees
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COX SEED AND PLANT CO.,

411-415 SANSOME STREET,

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ESTABLISHED 1853

Stockton Nursery.

Get our Catalogue and Prices before purchasing your Trees or
Anything in the Nursery-Line.

Clean, Thrifty, Healthy Stock at
Prices to Suit the Times.

E. C. Clowes,

Stockton

California.



50c Trial Sets Of Choice Seeds, Plants and Fruits.

By mail postpaid, safe arrival and satisfaction guaranteed. Order
by the letters and the numbers from this advertisement NOW, as these are introductory
sets, not in catalogue, an **Elegant Annual of 168 pages**, which will
be sent free with first order. If none of these sets suit you and you want anything
in our line send for **CATALOGUE FREE**. About 60 pages devoted to
VEGETABLE and FLOWER SEEDS, 70 to PLANTS and the
balance to the CREAM OF THE FRUITS.

Set B—10 pkts. choice Vegetable Seeds, 16 s'ts. 50c
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" U—2 Elegant Palms.....50c
" J—10 Sorts Lovely Everblooming Roses.....50c
" G—10 Prizo Chrysanthemums, 10 sorts.....50c
" H—4 Superb French Cannas, 4 sorts.....50c
" K—10 Showy Geraniums, 10 sorts.....50c
" L—30 Fine Gladiol Flowering Bulbs.....50c
" N—10 Tuberoses, Double Flowering Size.....50c
" O—10 Flowering Plants, 10 sorts.....50c
" P—6 Hardy Ornamental Shrubs, 6 sorts.....50c
" Q—6 Hardy Climbing Vines, 6 sorts.....50c

One-half each of any two sets 50c, any 3 sets \$1.25, 5 sets \$2.00.

**EVERYTHING OF THE BEST FOR ORCHARD, VINEYARD, LAWN,
GARDEN, GREENHOUSE AND CONSERVATORY. MILLIONS OF TREES,
SHRUBS, VINES, ROSES, ETC.**

41st YEAR. 1,000 ACRES. 29 GREENHOUSES.
THE STORRS & HARRISON CO., Box 160 Painesville, O.

ESTABLISHED 1863.

THOS. MEHERIN,
NURSEYMAN AND SEEDSMAN.

AGENT FOR THE CALIFORNIA NURSERY CO.

FRUIT TREES.

Large and Complete Stock of Fruit and Ornamental Trees and Plants, at prices to suit the times.

SEEDS!

GRASS, CLOVER, VEGETABLE, FLOWER AND TREE SEEDS, ETC.
Catalogue mailed free on application. Please mention this paper.

THOS. MEHERIN, 516 Battery Street (P. O. Box 2059), San Francisco, Cal.

ALEXANDER & HAMMON,

RIO BONITO NURSERIES, Biggs, Butte Co., Cal.

DECIDUOUS FRUIT TREES

OUR SPECIALTY.

The most Complete Assortment of General Nursery Stock grown on the Pacific Coast.

1,000,000 Trees for the Season of 1894-95 in Stock.

Acknowledged everywhere to be equal to the best. Guaranteed to be healthy and free from
cale or other pests.

Send for Catalogue and Prices. Correspondence solicited. Address:

Alexander & Hammon,

Biggs, Butte County, Cal.

FANCHER CREEK NURSERY,

FRESNO, - - - - CALIFORNIA.

Offers a Full and Complete Assortment of

★ **FRUIT TREES,** ★
★ **OLIVE TREES,** ★
★ **GRAPE VINES,** ★
ORNAMENTAL TREES, AND ROSES. ★
CITRUS TREES.

Send for Descriptive Catalogue and Prices.

ADDRESS

GEO. C. ROEDING, = = = = MANAGER.

CENTRAL ALL LEADING VARIETIES OF FRUIT TREES.

NURSERY

**GOOD, THRIFTY STOCK, FREE FROM ROOT
KNOT AND INSECT PESTS.**

M. VAN GELDER, PROPRIETOR.

(Successor to Van Gelder & Wylie.)

Write for prices on large and small orders.

ACAMPO, CAL.

ORANGE TREES at Rock Bottom Prices.

To close out a special lot of three-year buds of Med. Sweets (five-year roots), finely
branched, 4x6 feet, we offer them at \$25 the hundred.
Write us if you want Med. Sweets or Wash. Navels, we can give you lower prices
for good trees than any one.

**Cal. Fan and Cham. Excelsa Palms, Laurustinus, Dracaena Indivisa, Roses,
Tuberoses, Etc., Etc.**

Agents wanted in every town in Northern and Central California where we are
not represented.

ADDRESS ALOHA ORANGE NURSERIES,

MRS. E. M. FRASER, Propr.
Fred C. Miles, Manager.

PENRYN, PLACER COUNTY, CAL.



THE most successful farmers and gardeners
buy their seed directly from the growers; for
this reason we raise largely the most risky
kinds, especially Cabbage and Onion Seed. This
latter is extra fine this season. No catalogue
contains more varieties of vegetable seed, and none more
of the new that are really good—see outside cover
for an illustrated selection from our new special-
ties, which we will sell at half rates. Catalogue free.
**J. J. H. GREGORY & SON, Seed Growers,
MARBLEHEAD, MASS.**

Farming as It Has Been and as It Ought to Be.

Colusa Sun.

In the last twenty-five years Colusa county has shipped over a hundred millions of dollars of products to other parts of the world. Several thousand people have put in their labor, and the land is mortgaged to-day for as much as it would bring at auction. The land is not worth intrinsically half as much as it was a quarter of a century ago. The people, then, have robbed the soil of its productive capacity—have skimmed the cream off the acres and have, so to speak, mortgaged the whey! This is what speculative farming has done for this section.

Is it not time that those who think they have some chance of remaining in the country should come to some basis upon which it is possible to get back to farming as nature intended farming to be? Is it not time that the home idea should prevail against the speculative idea of a farm in Colusa and a home in some distant city? How much better off the country would have been to-day had each farmer have said: "Upon this piece of land I will make a home; I can have my own bread, my own meat, my own poultry, my own dairy, my own fruit of infinite variety, my own vegetables of every kind, and hence I will sit me down, gather my family about me and live like a king." Had this been the idea a quarter of a century ago, would the country have been to-day mortgaged for its auction price?

National Dairy Congress.

D. P. Ashburn, secretary, of Gibbon, Nebraska, writes us that the Second Annual Meeting of the National Dairy Congress will be held in the building of the Department of Agriculture in Washington, D. C., on Feb. 26 and 27, 1895. Opening session at 10 o'clock A. M. Hon. J. Sterling Morton, Secretary of Agriculture, will deliver an address of welcome. An interesting programme on practical dairy topics by men of national reputation has been arranged.

The National Dairy Congress was organized at a meeting held at Cleveland, Ohio, Feb. 7, 1894, for the purpose of combining in a national organization all State associations and dairy workers throughout the United States in a united and more efficient effort to advance the interests of the dairy industry throughout the whole country. Article 3 of the constitution provides that "The National Dairy Congress shall be composed of two delegates from each State Dairy Association and one delegate from each experiment station that conducts dairy experimental work. Provided, that in those States where no State Dairy Association exists the Governor may appoint two delegates, who shall be practical dairymen. Thus the congress combines the efforts of the scientific with the practical. An enthusiastic meeting that will result in great benefit to the dairy industry is confidently anticipated. Any Californians interested in dairying who may be in the East next month should make an effort to attend this meeting.

Bob—"What did the lecturer say when you threw those cabbages at him?" Dick—"Oh, he said he had hoped the audience would be pleased, but he really hadn't expected they would entirely lose their heads."—Dallas (Texas) Herald.

STATE OF OHIO, CITY OF TOLEDO, } ss.
LUCAS COUNTY.

FRANK J. CHENEY makes oath that he is the senior partner of the firm of F. J. CHENEY & Co., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of HALL'S CATARRH CURE.

Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1895.

{ SEAL } A. W. GLEASON,
Notary Public.

Hall's Catarrh Cure is taken internally and acts directly upon the blood and mucous surfaces of the system. Send for testimonials, free.
F. J. CHENEY & Co., Toledo, O.
Sold by Druggists, 75c.



Cough! Cough!! It's the hacking cough that often ends in the most serious trouble.

Pain-Killer

stops the cough at once by removing the cause and thus prevents the trouble. Put two teaspoonfuls of this good old remedy in a small cup of molasses, take $\frac{1}{4}$ teaspoonful often, and your cough will quickly cease. Sold everywhere. You now get double the quantity of Pain-Killer for the same old price.

Perry Davis & Son, Providence, R. I.

FOR SALE!

Twenty or Fifty Acres of a

Fruit Ranch

In Lagoon Valley, near Vacaville, Solano County, Cal. French Prunes, Bartlett Pears and Cherries in full bearing. House with modern improvements.

C. H. STEINMETZ,

Vacaville, California
Or 126 Kearny Street, San Francisco.

Gravity and Pump Irrigation

GOVERNMENT AND TITLED LAND.

Individual and colony tracts. Early settlement land. Investment and development.

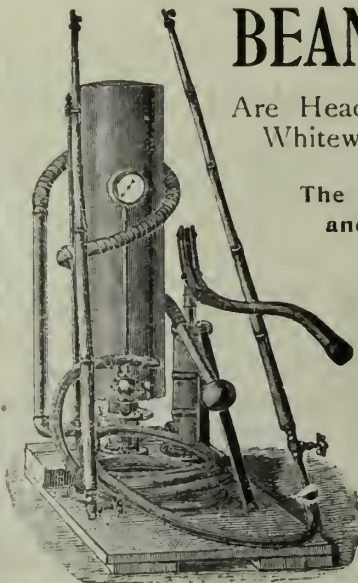
D. N. DILLA,

Second Floor, Room 3, Mills Building, S. F.

5/A HORSE BLANKETS
ARE THE STRONGEST.
Made in 250 Styles.
For either road or stable use.
All shapes, sizes and qualities.
WM. AYRES & SONS, PHILADELPHIA.

ASPINWALL POTATO-PLANTER

We manufacture the celebrated Aspinwall Potato Planter, Aspinwall Potato Cutter, Aspinwall Paris Green Sprinkler, etc. Every machine warranted. These machines greatly reduce the cost of raising potatoes. Send for Free Illustrated Catalogue.
ASPINWALL MANUFACTURING CO., 48 Sabin St., Jackson, Mich.
HOOKER & CO., Agents, 16 and 18 Drumm Street, San Francisco, Cal.



BEAN SPRAY PUMP CO.

Are Headquarters for Complete Spraying and Whitewashing Outfits.

The Best Spray Pump, Best Spray Nozzles and Best Spray Hose.

Nozzles arranged to spray at any angle ordered.

THE BEAN CYCLONE NOZZLE—a new invention this season—is self-cleaning and throws a fine and penetrating spray.

The BEAN and NEW BEAN NOZZLES, so well known, are also our invention.

Bean Spray Pump Co.

Los Gatos, Cal.



You want to make a little more money this year than you did last. One way to accomplish it is to save the small items of loss. The way to do it in a creamery is to use a

Sharples Russian Separator.

It saves practically all of your oil bill
It saves practically all of your repair bill
It saves time. It saves wear and tear
It saves all the butter.

THE BOWL ALONE REVOLVES.

With a Russian there are no belts to wear out, no jack, no engine, no shaft, no countershaft to turn, no spare parts to renew. There is nothing about a Russian separator for show. It is all for business, and the machine is always ready to do business. The public appreciate the Russian. They bought over twice as many separators from us in 1894 as during the year previous, and indications are that the sales will be in 1895 double 1894.

Send for circulars and please mention this paper

Baker & Hamilton,

Sole Pacific Coast Agents,

SAN FRANCISCO. SACRAMENTO. LOS ANGELES. NEW YORK.

Figures for Farmers

The first cost and only cost of the Planet Jr. combined Drill, Wheel Hoe, Cultivator Rake and Plow, a machine that does all that its name implies, is small. If you do your own work it will save at least half your time and labor. If you hire it done, it will make an equal reduction in your expenses. If you are figuring to increase your crops and reduce the cost of production, the Planet Jr. book for 1895, which we send free, will show you how to secure the right result. Even if you are satisfied to plod, the knowledge will do you no harm. Send for the book to-day.

S. L. ALLEN & CO., Philadelphia.

TREE - WASH.

Olive Dip.

"Greenbank" Powdered Caustic Soda and Pure Potash.

T. W. JACKSON & CO.

Sole Agents. - No. 226 Market Street
SAN FRANCISCO, CAL.

J.I.C. DRIVING BIT
IT WILL CONTROL THE MOST VICIOUS HORSE.
75,000 sold in 1891.
100,000 sold in 1892.
THEY ARE KING.
Sample mailed X C for \$1.00
Nickel, \$1.50.
Stallion Bits 50 cts. extra.
RACINE MALLEABLE IRON CO., RACINE WIS.
J. P. Davies Mgr.

DOUBLE BREECH-LOADER \$5.00.
RIFLES \$1.75.
WATCHES
GUNS
All kinds cheaper than elsewhere. Before you buy send stamp for 60 page catalogue.
POWELL & CLEMENT CO.
166 N. 1st St., Cincinnati, O.

FAT & FOLKS

Using "ANTI-CORPULENT PILLS" 1 one 15 lbs. 8 months. Cures fleshiness, contains no poison and never fails. Sold by Druggists everywhere or sent by mail. Particulars (sealed) to WILCOX SPECIFIC CO. Phila. Pa.

STUMP PULLERS

HOOKER & CO.
16 & 18 DRUMM ST. S.F.

PILES.

BICURA TREATMENT CURES THEM. Sent postpaid for 6c. BICURA CO., 310 California St., San Francisco.

S. F. MARKET REPORT.

Market Review.

SAN FRANCISCO, Jan. 30, 1895.

FLOUR—We quote: Net cash prices for Family Extras, \$3 40; 3 50 7 bbl; Bakers' Extras, \$3 30; 3 40; Superfine, \$2 25 25 7 bbl.

WHEAT—There is no active movement in progress. Of course there is enough doing all the time to prevent the spot market from getting into a rut of stagnation, but business generally is of unsatisfactory character. Exporters take scarcely any interest in matters, though seemingly ready to buy when figures and offerings suit their ideas. Things will have to change for the better at distant centers before any local movement can be expected. Shippers quote the market at 81½¢ cfl for standard wheat, with 82½¢ for choice parcels. Possibly a round lot could be placed to better advantage, as exporters would sooner buy large parcels even at an advance. Milling grades sell at a range of 87½¢ to 92½¢ cfl. Walla Walla Wheat, 72½¢ to 75¢ for fair average quality, 75¢ to 80¢ for blue-stem and 67½¢ to 70¢ for damp.

BARLEY—Brisk trading is not a feature of the sample market. On the contrary, trade is slow and dull, with prices soft. Some speculative business is developing in the Call Board, the favorite option being May delivery. We quote: Feed, fair to good, 75¢ to 78½¢; choice, 80¢; Brewing, 85¢ to 92½¢ cfl.

OATS—Offerings are rather too large at the present time for any effort to raise prices to be successful. At the present time there are indications that the market will do better in proper season. The demand has improved somewhat of late, and dealers are rather encouraged than otherwise at the outlook. We quote: Milling, \$1 02 to 1 15; Surprise, \$1 05 to 1 15; fancy feed, \$1 01 to 1 05; good to choice, 95¢ to \$1; fair to good, 90¢ to 95¢; poor to fair, 82½¢ to 87½¢; Black, \$1 15 to 1 30; Red, \$1 05 to 1 17½; Gray, 92½¢ to 97½¢ cfl.

CORN—There is next to nothing doing in this line. Steady holding, however, keeps prices in proportion. We quote: Large Yellow, \$1 20 to 1 25; small Yellow, \$1 22 to 1 27½; White, \$1 20 to 1 27½ cfl. Damp lots sell below quotations.

HAY—Trade is better now that the rain is over. Prices show steadiness. Wire-bound Hay sells at \$1 10 to 1 15; loose-bound Hay, \$1 05 to 1 10. The wholesale city prices for rope-bound Hay: Wheat, \$9 00 to \$11 50; Wheat and Oat, \$8 50 to \$11; Oat, \$10 to \$11; Alfalfa, \$8 00 to \$9; Barley, \$8 50 to \$10; Clover, \$8 50 to \$10; compressed, \$8 50 to \$11; Stock, \$8 to \$7.

STRAW—Quotable at 70¢ to 80¢ per bale.

FEED—Manhattan Horse Food (Red Ball Brand) in 100-lb. cabinets, \$8; Manhattan Egg Food, 100-lb. bags, \$11 50.

HOPS—Business is of small proportions at a wide range in prices, say 40¢ to 80¢ per lb., the latter an extreme figure for fancy stock. Stocks in the city are said to be light, and it is not believed that any very heavy quantity is stored away in the interior.

ONIONS—Quotations are steady at a range of 60¢ to 85¢, with sales of fancy stock at 90¢ cfl.

POTATOES—Choice stock is not plentiful and full prices are obtainable for all such offerings. We quote as follows: Volunteer New Potatoes, 1½¢ to 2¢ per lb; Early Rose, 35¢ to 45¢; River Reds, 30¢ to 35¢; Burbanks, 40¢ to 50¢; Oregon Burbanks, 60¢ to 85¢; Salinas Burbanks, 75¢ to \$1; Sweet, 50¢ to \$1 for Rivers and \$1 50 to 1 75 cfl for choice stock.

BEANS—Business in this line is quiet and slow. Choice Whites are steady in price, as such stock is none too plentiful. Offerings of Pea Beans show a good proportion of medium and poor quality. We quote as follows: Bayos, \$1 75 to 1 90; Butter, \$1 75 to 1 80 for small and \$2 00 to 2 25 for large; Pink, \$1 10 to 1 35; Red, \$1 60 to 1 65; Lima, \$1 10 to 1 25; Pea, \$2 25 to 2 50; Small White, \$2 25 to 2 55; Large White, \$2 10 to 2 30; Blackeye, \$2 75 to 3; Red Kidney, \$2 75 to 3; Horse, \$1 60 to 1 70 cfl.

VEGETABLES—We quote: Hothouse Cucumbers, 75¢ to \$1; Asparagus, 17½¢ to 25¢ per lb.; Rhubarb, \$1 50 per box; Mushrooms, 80¢ to 1 10 per lb for common and 150¢ to 250¢ for good to choice; Los Angeles Tomatoes, 75¢ to \$1 25 per box; String Beans, 60¢ to 70¢ per lb; Green Peas, 30¢ to 40¢ per lb; Marrowfat Squash, \$5 to 7 per ton; Hubbard Squash, \$10 per ton; Green Peppers, 50¢ to 60¢ per lb; Turnips, 50¢ cfl; Beets, 60¢ to 75¢ per sack; Carrots, 30¢ to 50¢; Cabbage, 30¢ to 40¢ cfl; Garlic, 30¢ to 40¢ per lb; Cauliflower, 30¢ to 40¢ per dozen; Dry Peppers, 150¢ to 175¢ per lb; Dry Okra, 12½¢ to 15¢ per lb.

FRESH FRUIT—Pears have been dropped from the list and the market is now almost limited to the one variety of Apples, of which the supply is quite large, especially of poor grades. We quote: Persimmons, 30¢ to 50¢ per box; Apples, 40¢ to \$1 per box.

CITRUS FRUIT—California Navel, \$1 50 to 2 50; Seedlings, \$1 00 to 1 50 per box; Sonora Oranges, \$1 25 to 1 50 per box; Mexican Limes, \$4 50 to 5 50 per box; California Limes, in small boxes, 50¢ to 75¢ per box; Lemons, Sicily, \$3 00 to 3 50; California Lemons, 75¢ to \$1 25 for common and \$1 50 to 2 50 for good to choice.

DRIED FRUIT—The market shows healthy tone, though business continues of small volume. Peaches of strictly choice quality are somewhat scarce and somewhat firm in price. Pears show steadiness, though not in active request. Sun-dried Apples are in very limited offering, but evaporated stock is in good supply. Raisins are dull, with the situation against sellers.

Following are the prices furnished by the Fruit Exchange. The figures presented represent car-load lots, small parcels occasionally selling at slightly lower rates:

Apricots—Fancy Moorpark, 8½¢; choice, do, 8¢; fancy, 7½¢; choice, 7¢; standard, 6½¢; prime, 6¢.

Apples—Evaporated, 5½¢ to 7¢; sun-dried, 4 to 5¢.

Peaches—Fancy, 6½¢; choice, 6¢; standard, 5½¢; prime, 5¼¢; peeled, in boxes, 12 to 13¢.

Pears—Fancy, halves, 5½¢; quarters, 4½¢; choice, 4¼¢; standard, 3½¢; prime, 3¢.

Plums—Pitted, 4 to 5¢; unpitted, 1½ to 2¢.

Prunes—Four sizes, 4½ to 4¾¢.

Nectarines—Fancy, 7¢; choice, 6½¢; standard, 6¢; prime, 5½¢.

Figs—White, choice, 5 to 5½¢; Black, choice, 1½ to 2¢.

Raisins—In sacks (50-lb. boxes selling at 1½¢ per lb. higher): 4-crown, loose, 4¢; 3-crown, 2½¢; 2-crown, 2¢; seedless Sultanias, 3¢; seedless Muscats, 20¢ per lb; 3-crown London Layers, \$1 25 per box in 20-lb. boxes; clusters, \$1 50; Dehes clusters, \$2; Imperial clusters, \$3; 4-crown, loose, \$1 15; 4-crown, loose, faced, \$1 25 per box.

Dried Grapes—1½¢ per lb.

NUTS—Business is small in volume, being confined almost wholly to jobbing demands. We quote: Chestnuts, 8 to 10¢; Walnuts, 5 to 7¢ for hard shell, 7 to 9¢ for soft shell and 8 to 9¢ for paper shell; California Almonds, 8 to 10¢ for soft shell, 5 to 5½¢ for hard shell and 8 to 9¢ for paper shell; Pecans, 4 to 4½¢; Hickory Nuts, 5 to 6¢; Filberts, 8½ to 9¢; Pecans, 6¢ for rough and 8¢ for polished; Brazil Nuts, 7 to 7½¢ per lb; Cocoanuts, \$5 to 5 50 per 100.

CHEESE—The supply is enough for all market wants. We quote: Choice to fancy, 8 to 10¢; fair to good, 6 to 7¢; Eastern, ordinary to fine, 11 to 14¢ per lb.

BUTTER—For one or two special brands of fancy creamery full figures are realized, but otherwise the market is very weak, quotations inclining in favor of buyers. We quote as follows: Fancy

creamery, 21 to 22¢, with sales at 23¢; fancy dairy, rolls, 16 to 17¢; good to choice, 15 to 16¢; fair, 13 to 14¢; store lots, 10 to 12¢; pickled roll, 13½ to 15¢; firkin, 14 to 15¢ per lb.

EGGS—The situation is against sellers. The roads in the interior are drying up and shipments are coming in quite freely. There is desire to sell and dealers accept low figures sooner than allow stocks to accumulate. We quote: California Ranch, 21 to 23¢; store lots, 17 to 20¢ per dozen.

POULTRY—Trade is slow and the advantage is on the side of buyers, as offerings are somewhat free. We quote: Live Turkeys—Cobblers, 10 to 11¢; Hens, 10 to 11¢ per lb; dressed Turkeys, 12½ to 14¢ per lb; Roosters, \$4 for old, and \$4 50 to 5 50 for young; Broilers, \$3 to 4 for small and \$4 to 5 for large; Fryers, \$4 50 to 5; Hens, \$4 to 5; Ducks, \$5 to 6; Geese, \$1 50 to 2 per pair; Pigeons, \$1 to 1 50 for old and \$1 75 to 2 25 per dozen for young.

WOOL—The market is very quiet and prices are more or less nominal. Dealers do not look for any very marked activity until the spring season opens. We quote Fall:

Free Northern, 7 to 8½¢
Northern, defective, 5 to 7¢
Southern & San Joaquin, light and free, 5 to 6¢
Do, defective, 3 to 4¢

Fruit Exchange Bulletin.

Following is Bulletin No. 35 of the California Fruit Exchange in its full official form:

SAN FRANCISCO, Jan. 30, 1895.

Dried fruits to customers in Eastern markets may be quoted at the following rates, f. o. b. California, subject to commission:

AS REPORTED BY SAN FRANCISCO HANDLERS.
GRADING—SAN FRANCISCO STANDARD.

	Prime.	Standard.	Choice.	Fancy.
Apricots	5	6	6½	7½ to 8
Peaches	5	6	6½	8
Pears	2	4	5	6
California Prunes—Four sizes, 4½ to 4¾; 40-50, 9; 50-60, 6½; 100-120, 2½; 120 and over, 2½.				
Apples—S. F. Market 5, 5½, 6, 6½.				

There seems to be rather more inquiry from real buyers than last week, while the speculative flurry among local dealers has disappeared. The most inquiry seems to be for small prunes, which two months since were practically unsalable. The quotation of 6½¢ for 50-60 prunes, which is all we can get from San Francisco handlers, would not be accepted in the Santa Clara valley, where remaining stocks are held firm at 7 cents. There is no trade in four sizes of prunes, holders refusing to accept 4½ cents; 40-50 prunes seem to be pretty much out of first hands.

CALIFORNIA FRUIT EXCHANGE,
By EDWARD F. ADAMS, Mgr.

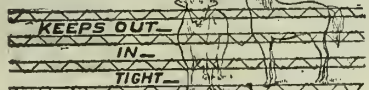
List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING JANUARY 15, 1895.

532,742.—SEPARATOR—H. Arden, Seattle, Wash.
532,628.—HAIR DIPPER—C. W. Babcock, Portland, Or.
532,527.—PUMP—J. P. Cahill, Oakland, Cal.
532,063.—BAND SAW MILL—D. B. Hanson, S. F.
532,461.—SURGICAL SPLINT—R. Hoppe, S. F.
532,703.—LOCK—W. G. Rex, Shelton, Wash.
532,595.—CURRENT WHEEL—Seibert & Young, Medical Lake, Wash.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

"Hartman" Wire Panel Fence
FOR FIELD AND FARM.

HUMANE, STRONG, VISIBLE, ECONOMICAL.

Holds but doesn't harm your stock.
Can be erected so as to remain TIGHT the year 'round.
Our prices like our fences are practical.
Ask your dealer for circular and estimate or write to
HARTMAN MFG. CO., 227 Broadway, NEW YORK.
HARTMAN MFG. CO., 601-2 Manhattan Bldg, CHICAGO.
Factories: ELLWOOD CITY, Lawrence Co., Penna.
For "Handsome Calendar for '95" (The Chicago Tribune Says), send 4cts. in stamps to the above.
In answering advertisements mention this paper.

CALIFORNIA FRUITS

—AND—
HOW TO GROW THEM.

A Manual of Methods which have Yielded Greatest Success; with Lists of Varieties Best Adapted to the Different Districts of the State.

Practical, Explicit, Comprehensive. Embodying the experience and methods of hundreds of successful growers, and constituting a trustworthy guide by which the inexperienced may successfully produce the fruits for which California is famous. Second edition, revised and enlarged. By EDWARD J. WICKSON, A. M., Assoc. Prof. Horticulture and Entomology, University of California; Horticultural Editor Pacific Rural Press, San Francisco; Sec'y California State Horticultural Society; Pres. California State Floral Society, etc.

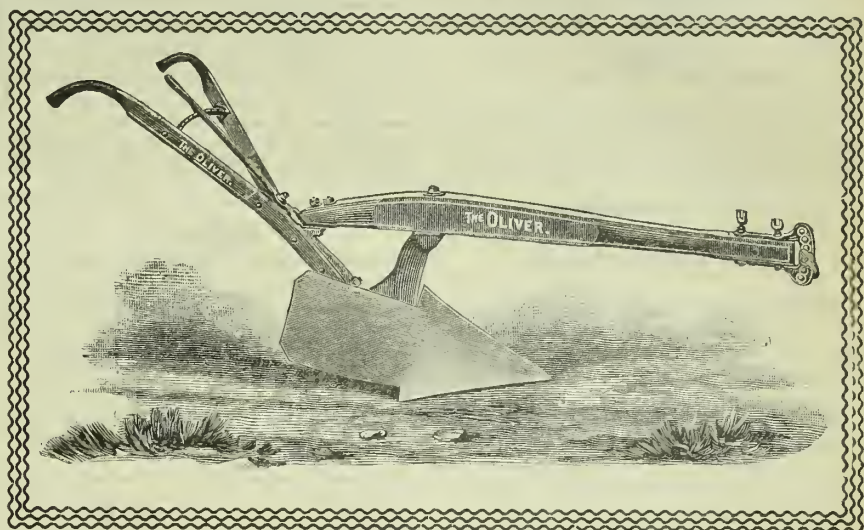
Large Octavo, 599 pages, fully illustrated, price, \$3.00. postpaid.
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Publishers Pacific Rural Press,
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Position as Manager on a Large Farm. Thorough acquaintance with Stock Raising, Dairy Business, General Farming. Experience in foreign countries; French, English, German correspondence; Bookkeeping; Graduate of Agricultural Academy in Germany. P. O. box 1835, Bakersfield, Kern County, Cal.

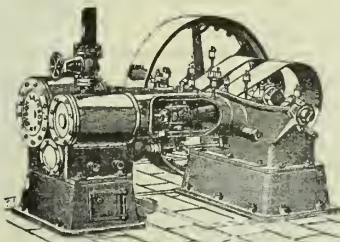
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OLIVER'S NOS. 51½, 52 AND 53



Are the Latest, Best and Most Popular Sidehill Plows Ever Made.

Oliver Chilled Plow Works, 37 MARKET STREET, SAN FRANCISCO, CAL.



With only one valve and GREATEST ECONOMY OF FUEL.
Cheaper than Single Engine of same horse power.

BYRON JACKSON MACHINE WORKS,

Write for Catalogue No. 15.

625 Sixth Street, San Francisco.

AIR PUMP

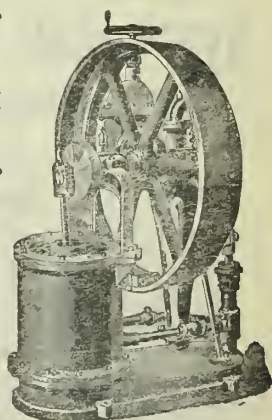
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BOILER FEED PUMP

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Store Your Grain Where Your Best Interests Will Always be Consulted.

WAREHOUSES AND WHARF —OF THE— Grangers' Business Association, PORT COSTA.

Capacity of Warehouse, 50,000 tons; wharf accommodations for the largest vessels afloat.

Grain received on storage for shipment, and for sale on consignment.

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CHAMPION SPRAY PUMP

Is perfectly double-acting and has a brass-lined cylinder. The motion of the piston is horizontal. The handle is so arranged that the leverage is very powerful, and the movement is easy and natural. The air chamber is unusually large, admitting of the continuous and even discharge necessary for good and thorough spraying. The valves are metal and have metal seats. They all lie directly beneath the air chamber and are readily exposed on loosening four bolts, and without touching the cylinder. These pumps are superior to any others made. Send for Catalogue of Spray Pumps.

WOODIN & LITTLE,
312 and 314 Market St., San Francisco, Cal.

Patrons of Husbandry.

San Joaquin Pomona Grange.

Lodi, Cal., Jan. 28, 1895.

To THE EDITOR: San Joaquin Co. Pomona Grange, P. of H., met in special session in Lodi, Thursday last, Jan. 24th. Business of importance was brought before the grange and work mapped out which, if carried to a successful issue, will redound to much good for San Joaquin county and the State at large.

A Legislative Committee of three was elected, viz., J. D. Huffman, M. T. Noyes and Ezra Fiske, whose duty it will be—and also a pleasure—to assist in the passage of clean acts, beneficial to all.

Our grange is alive to the interest of its members, and by the grace of God and Jim Budd, we will do what we can for their benefit.

J. A. ANDERSON, Sec'y.

In the Right Direction.

The proposition made to the State Grange Executive Committee at its last meeting, for them to select some able person from the grange to take charge of the grange department, was in the right direction. It is one that will give satisfaction to a large majority of our members. It will do more to revive the grange interest than many lecturers could do. I hope that the committee will see their way clear to give this idea a fair trial, and that without delay.

GRANGER.

From Grass Valley.

R. S. T., the faithful correspondent of Grass Valley Grange, writes to report a highly successful grange occasion when the new officers were installed two weeks ago. Grass Valley Grange is taking a lively interest in the various revival propositions and stands ready to co-operate with any effort that may be set on foot.

AS IN YOUTH

Ayer's Hair Vigor

CORDIALLY INDORSED.



RESTORES
Natural Growth
OF THE
HAIR
—WHEN—
ALL OTHER
Dressings
FAIL.

"I can cordially indorse Ayer's Hair Vigor, as one of the best preparations for the hair. When I began using Ayer's Hair Vigor, all the front part of my head—about half of it—was bald. The use of only two bottles restored a natural growth, which still continues as in my youth. I tried several other dressings, but they all failed. Ayer's Hair Vigor is the best."—Mrs. J. C. PREUSSER, Converse, Texas.

AYER'S HAIR VIGOR

PREPARED BY

Dr. J. C. AYER & CO., LOWELL, MASS.

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A SMALL FARM ON MOST favorable terms, address

S. C. TRAYNER,

Marysville, California.

LIGHTNING WELL MACHINERY Works.

All kinds of tools. Fortune for the driller by using our Adamantine process; can take a core. Perfected Economical Artesian Pumping Rises to work by Steam, Air, etc. Let us help you. THE AMERICAN WELL WORKS, Aurora, Ill.; Chicago, Ill.; Dallas, Tex.

BACK FILES of the PACIFIC RURAL PRESS (unbound) can be had for \$2.50 per volume of six months. Per year (two volumes), \$4. Inserted in Dewey's patent binder, 50 cents additional per volume.

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Six lines or less in this directory at 50c per line per month.

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F. H. BURKE, 626 Market St., S. F. All Prize Holsteins; Grade Milch Cows. Fine Pigs.

BILLS—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times, either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

JERSEYS—The best A. J. C. C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale.

P. H. MURPHY, Perkins, Sae. Co., Cal. Breeder of Shorthorn Cattle, Poland-China & Berkshire Hogs.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

PETER SANE & SON, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

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J. W. FORGUES, Santa Cruz, Cal., has the best stocked and equipped poultry ranch on the Pacific coast, and makes a specialty of Barred P. Rocks, Brown Leghorns, Black Minorcas, Pekin Ducks. Seventy acres to Leghorns, six acres to Minorcas, and my home range to Barred P. Rocks and Pekin Ducks. I guarantee satisfaction in every order. Exhibition birds and breeding stock Eggs for sale. Reference, People's Bank.

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BERKSHIRES AND POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. Wm. Niles & Co., Los Angeles. Est. 1876.

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Short-Horn Bulls

OF MILKING STRAINS.

CALVES, YEARLINGS AND TWO-YEAR-OLDS.

ROBERT ASHBURNER,

Baile Station, San Mateo Co., Cal.

The cars of the S. F. and San Mateo Electric Road pass the place.

Jacks and Jennets,

RAISED FROM IMPORTED STOCK, for sale by V. GIANELLA, Hanout, Butte county, Cal.

FRANK A. BRUSH,

SANTA ROSA, CAL. (Care Santa Rosa National Bank.) Importer. Breeder. Exporter.

S. C. White Leghorns,

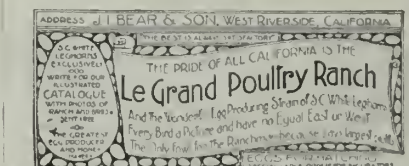
S. C. Brown Leghorns,

Barred Plymouth Rocks,

Black Minorcas.

Eggs, \$3 per 13.

Send for Circular.



EGGS FOR HATCHING,

In large or small lots, from Barred Plymouth Rock, S. C. Brown Leghorn and Black Minorcas, at 50c per doz. MRS. J. G. FREDERICKS, Madison Cal.



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Your income by buying an incubator and engaging in the chicken business. Send stamp for our catalogue of incubators, wire netting, blooded fowls and poultry appliances generally. Remember the Best is the Cheapest. PACIFIC INCUBATOR CO., 1317 Castro St., Oakland, Cal.



HALSTED & INCUBATOR COMPANY,

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JUBILEE, JUBILEE, JUBILEE. — The late improvements on the Jubilee Hatcher make it head the list. It is a perfect self-regulating hot water machine, with copper boilers and an entirely new system of operation. The sizes made now are 100, 200, 300 and 500-egg capacity. For sale by H. F. WHITMAN, Agent, 2045 Alameda Ave., Alameda, Cal. Send for circular.

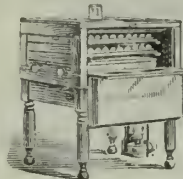
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INCUBATORS Self-Regulating BROODERS.

Most Perfect Machines, Best Material and Workmanship. Lowest in Price. Our Thermo-Regulator is as accurate as a Thermometer. Send 4c. for large illus. Catalogue. Tells all about it. High Class Poultry and Eggs. Headquarters for Poultry Supplies. PEERLESS INCUBATOR AND BROODER CO., Quincy, Ill.

BEEKEEPERS SEND FOR SAMPLE COPY OF CLEANINGS IN BEE CULTURE.

A Handsomely Illustrated BEE SUPPLIES Magazine, and Catalogue of BEE SUPPLIES FREE. THE A. I. ROOT CO., Medina, O.

Little's Chemical Fluid Non-Poisonous SHEEP DIP.



Beware of Cheap Imitations. One gallon, mixed with 60 gallons of cold water, will dip thoroughly 180 sheep, at a cost of one cent each. Easily applied; a nourisher of wool; a certain cure for scab. Little's Dip is put up in red, iron drums, containing 5 English or 6 1/2 American gallons, and is sold to the trade by the English gallon. For the convenience of our many customers it is also put up in one-gallon packages, for which we make no extra charge. Each drum and package bears the orange label of Little's Dip.

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(Successors to Falkner, Bell & Co.) 406 California St., San Francisco.



BERKSHIRES.

We received many compliments for our herd from visitors at the State Fair. We competed for 13 ribbons and won 11, as follows: 2 special; 2 sweepstakes; 3 firsts; 4 seconds.

We have a few Choice Pigs for sale.

SESSIONS & CO.,

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Feed our Poultry Food and you will have healthy chickens and lots of eggs. Ask your dealer for it.

Genuine only with RED BALL brand. Recommended by Goldsmith, Marvin, Gamble, Wells, Fargo & Co., etc., etc. It keeps Horses and Cattle healthy. For milk cows; it increases and enriches their milk. Manhattan Food Co., San Mateo, Cal.

J. K. ARMSBY COMPANY.

CHICAGO... SAN FRANCISCO
BOSTON... LOS ANGELES

Largest Handlers of Dried Fruits.

If you have a parcel to offer, submit samples to us. We are the principal handlers.

MOORE, FERGUSON & CO

WOOL, GRAIN, FLOUR

General Commission Merchants.

310 CALIFORNIA ST., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.



WHAT'S THE MATTER? FARM COVERED WITH STUMPS.



HAWKEYE GRUB & STUMP MACHINE.

Works on either Standing Timber or Stumps. Pulls an ordinary grub in one and a half minutes. Makes a clean sweep of two acres at a sitting. A man, a boy and a horse can operate it. No heavy chains or rods to handle. The crop on a few acres the first year will pay for the machine. You can not longer afford to pay taxes on unproductive timber land. Clear it, raise a bountiful crop with less labor and regenerate your old worn out land by pasturing. It will only cost you a postal card to send for an illustrated catalogue, giving price, terms and testimonials. Also full information concerning our L. X. L. Grubber, Iron Giant Grub and Stump Machine, Two Horse Hawkeye and other appliances for clearing timber and land. Address: MILWAUKEE MANUFACTURING CO., 641 5th St., Monmouth, Ill.

Summerville Shetland Pony Farm. For catalogue address Milne Bros. at above office and number. Breeders of Pure Shetland Ponies.

SAMPLE FREE American Bee Journal.

(Established 1861). Weekly, 32 pages. \$1 a year. 160-page Bee-Book Free!

All about Bees and Honey

G. W. YORK & CO.

50 Fifth Ave. CHICAGO, ILLINOIS.

Northern California in Midwinter.

Oroville Register.

Midwinter is not the best time in the year to see our part of the State, for the roads are usually muddy, considerable land is covered with water, and nothing shows up as well as it does later in the season. If an Eastern man, however, could view this section to-day, he might find some advantage over his Eastern home. The field and hills are covered with a rank growth of grass. In front of every house, along the streets, about each farm house through the country, are orange trees filled with golden fruit, if the oranges have not already been picked and marketed. There are lemon trees yet filled with lovely yellow fruit, some with buds and blossoms and some with small green lemons; olive trees yet bending with luscious berries, lime bushes in bearing, now and then a loquat in blossom, and Japanese persimmons as scarlet as though dyed in blood. There are flowers, not many, of course, but in every yard some roses, violets, geraniums and other varieties. The manzanita has already begun to bud and bloom. The buds of the almond and other fruits are beginning to swell, ready to burst forth when the weather is warmer. Twice ice has formed and several times there has been a white frost. When it is not raining, however, many let their fires die out or throw open the doors and windows for a time. Children play without wraps, and not one man in twenty thinks of putting on an overcoat in the morning unless he is going to drive. This land lacks a good deal of being Paradise, but it is preferable to a region where ice forms and snow falls during four months of the year. A thousand pretty views could be taken here in midwinter, showing palms and oranges, lemons and loquats, grass and flowers—all indicating a mild climate.

To Build a Tunnel for Moving a Library.

A tunnel is to be constructed from the crypt of the Capitol under the east park to the vaults of the great building for the Congressional Library, now in course of construction. The plans for the tunnel have been completed, and work upon it will soon be begun, that it may be finished in season to be used for the transportation of the nearly 1,000,000 books and pamphlets which make up the vast bulk of the library from the old rooms to the new. It is probable that a temporary railway will be laid in the tunnel that cars may be employed to carry a large quantity of books at once.

One of the most remarkable transfers of the kind in the history of libraries was that in Berlin some years ago, when a regiment of soldiers was put to the work, received their burdens, and marched and countermarched under perfect discipline, accomplishing in a short time the vast labor of removal.

It is possible that when the new building is occupied, a pneumatic tube may be laid through the tunnel that Congressmen may immediately receive books which they desire to consult without the trouble and loss of time which would be entailed in going to the library in person or awaiting a trip by a messenger. It is not expected that the work of removal will begin before the spring of 1896.

Gold and Silver of the World.

According to the last report of the Director of the Mint the estimated amount of gold money in the world is \$3,965,900,000, and the estimated amount of silver money \$4,055,700,000. This gold and silver money is chiefly distributed as follows:

	Gold.	Silver.
United States	\$626,000,000	\$625,300,000
United Kingdom	550,000,000	112,000,000
France	825,000,000	392,200,000
Germany	625,000,000	215,000,000
Russia	455,000,000	48,000,000
Austria Hungary	130,000,000	121,000,000
Egypt	120,000,000	15,000,000
Australia	105,000,000	7,000,000
Italy	96,100,000	30,000,000
Japan	80,000,000	88,300,000
India		950,000,000
China		750,000,000

The effective life and the receptive life are one. No sweep of arms that does some work for God, but harvests also some more of the truth of God, and sweeps into the treasury of life.—Phillips Brooks.

IRRITATION OF THE THROAT AND HOARSENESS are immediately relieved by "Brown's Bronchial Troches." Have them always ready.

The Right Way to Do Business.

That handsome calendar which the Hartman Mfg. Co., Chicago, have been selling for eight cents has created such a demand for itself as to warrant a second edition, which considerably cheapens the cost.

With characteristic fairness that company has reduced the price to 4 cents, and all original (8 cent) purchasers will receive an additional calendar. We have seen the calendar and it is only fair to say that it is very handsome.



General Nursery Stock.

—SEND FOR PRICES.—

*** CALIFORNIA RED PLUM.***

This is a new plum originated in Sutter county, where it has fruited for the past six years, and ripens the last of June. I am the only propagator of this new fruit and have no hesitancy in recommending this new plum for general planting, having over 1000 trees planted. Read the following letter from the largest plum grower and shipper in the State:

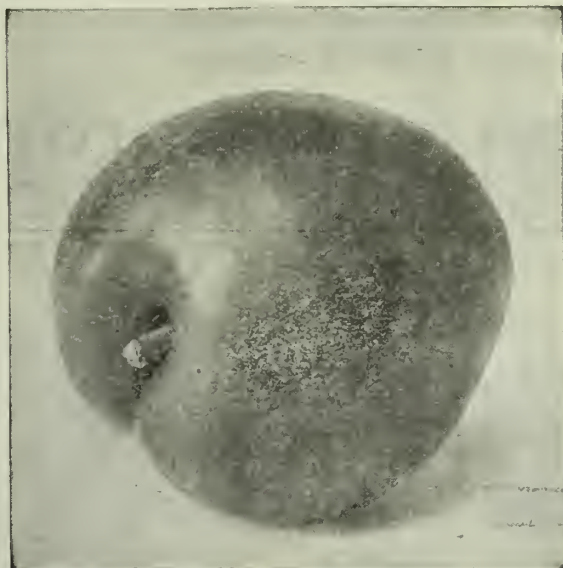
Mr. J. T. Bogue, Tudor, Cal. — I consider the California Red Plum the leading plum in the State. It certainly is one of the best shippers I have. It is very prolific, a fine grower, and has the qualities that go to make up a fine fruit for Eastern shipment. It is extra large, has a beautiful color when nearly hard, and will last from ten to twenty days after picking. It is earlier than the Peach Plum and fully as large. It hangs well on the tree after they will do to pick, and still remain firm and in good condition to ship. I consider it one of the best plums on the Coast. When it first begins to ripen it has a red cheek, but as it ripens it becomes a dark purple. I cannot speak in too high terms of the California Red Plum as a shipper. G. W. THISELL, SR.

Mr. J. T. Bogue, Tudor, Cal. — In answer to your inquiry regarding the California Red Plum, we wish to state that from experience we have had with this Plum in the Eastern markets, the net results show that it is a very valuable Plum and we take pleasure in recommending same, believing that it is one of the best shipping and selling Plums that has ever been discovered for California shippers. Yours truly, PORTER BROTHERS COMPANY, per NATE R. SALSBUURY, Vice-Pres.

JAMES T. BOGUE,

Formerly at Marysville.

TUDOR, SUTTER COUNTY, CAL.



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"WICKSON"
PLUM.

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4 to 6 Feet and 6 to 8 Feet High.

BOTTOM PRICES.

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Pomona, California.

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GEO. H. KUNZ, Sacramento.

Mission, 3 years.	5 to 6 feet
Mission, 2 years.	3 to 4 feet
Manzanillo, 2 years.	2 to 3 feet
Nevadillo, 2 and 3 years.	4 to 6 feet
Picholine, 2 years.	2 to 3 feet

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POMONA, CAL.

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FOR SALE AT BEDROCK PRICES. We are again in the market with clean, healthy stock, grown entirely without irrigation.

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CANADA NURSERY, REDWOOD CITY, CAL.

Olive Trees

IN VARIETY.

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JOHN S. CALKINS,

Pomona, Los Angeles Co., Cal.

OLIVE NURSERY.

Send for Catalogue.

C. F. LOOP & SON, Pomona, Cal.

Orange Culture in California.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thomas A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent, postpaid, at the reduced price of 75 cents per copy, in cloth binding. Address THE PACIFIC RURAL PRESS, 220 Market Street, San Francisco, Cal.

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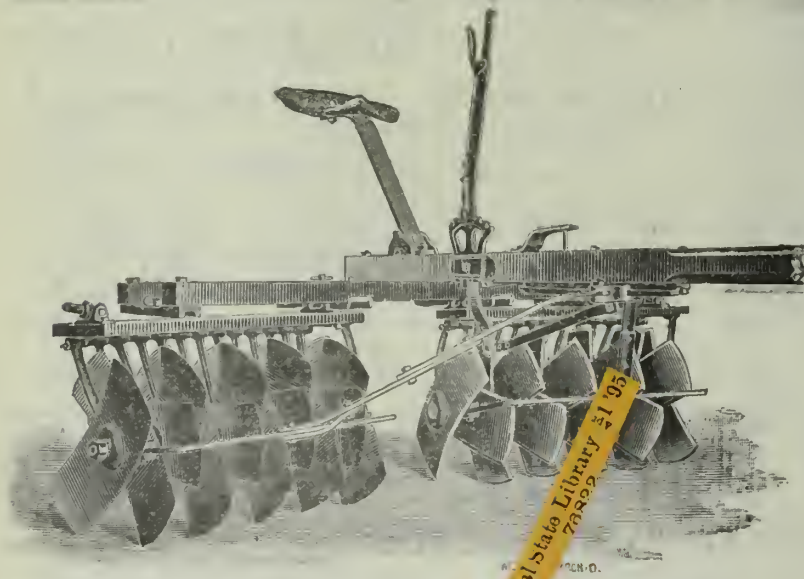
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The Best Implement of its class ever produced. All of our Reversible Spaders have adjustable heads so arranged that the wings may be extended and thus run under vines and trees.

JUST WHAT ORCHARDISTS AND VINEYARDISTS HAVE LONG NEEDED.

HOOKE & Co.—Dear Sirs:—I want to add my testimony to those who have tried your PACIFIC SPADER AND CULTIVATOR. It is by far the best cultivator, pulverizer and weed destroyer I have ever seen, and I can hardly see how it can be improved. Breaking all lumps over 2½ inches thick, and working up the ground to the depth of 6 to 8 inches, it is just what orchardists and vineyardists have long needed. I find no objection in your Spader because it takes power to work it. These one and two-horse cultivators are “not in it” alongside of the PACIFIC SPADER. All orchardists who wish to work up their ground thoroughly and properly should be in possession of one.

SAN JOSE, April 27th, 1893.

O. M. BOYLE.



THIS CULTIVATOR has been thoroughly tested in all conditions and is acknowledged to have more desirable features than any other Orchard Cultivator.

CANTON ORCHARD CULTIVATOR.

Combined Hand, Foot and Power Lift.

THE REAR FRAME, to which the legs or shanks are attached, is made from two pieces extra thick square gas pipe. This produces the very strongest form of frame. They are clamped together with thick wrought steel clamps and heavy bolts. Two wrought steel straps also clamp these gas pipes and project forward and encircle the axle, and are attached to the axle so as to raise and lower, which gives a low or high hitch to the gangs, and also gives more or less pitch to the shovels.

THE SHANKS OR LEGS, to which the shovels are attached, are made from steel with their front edge made sharp. These Shanks or Legs have a series of holes so they can be raised or lowered to meet any requirements.

RAISING LEVER.—We have a combined hand and foot Lever, and have also put on a strong spring to assist the operator in raising the gangs. This improved construction makes this the easiest Cultivator to operate now on the market.

SIZES.—No. 5, five feet, 11 shovels; No. 6, six feet, 13 shovels; No. 7, seven feet, 15 shovels. Write for prices.

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# THE PACIFIC RURAL PRESS

AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 6.

SAN FRANCISCO, SATURDAY, FEBRUARY 9, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.



THE LICK STATUARY RECENTLY COMPLETED IN THIS CITY.

## The Lick Statuary.

One of the newest and most notable of the city's attractions is the Lick Statuary in front of the City Hall. It is the result of a provision in the will of James Lick by which \$100,000 has been expended to commemorate notable features of the history of California. Of twenty-eight competing designs, that of Frank Happersberger was chosen, and the engraving discloses its form and characters.

The monument consists of one central, spherical structure of Rocklin granite, 47 feet in height from the ground to the tip of the spear of the bronze figure on top. This center structure is approached by a flight of steps, and wing-like pedestals extend from the main structure on four sides. The main figure, and the one that first attracts the eye, is a bronze figure of Eureka, 12 feet 6 inches high and weighing 8000 pounds. The four side pedestals each uphold bronze figures of heroic size. Upon and

around the center structure are bronze alto-reliefs, typifying California fruit and products, and portraits and names of men who have made California history.

The four lower pedestals each support elaborate bronze designs representing agriculture and commerce and mining, respectively. "Agriculture," the west figure, is portrayed by a comely maid sitting, holding a bunch of oranges in her right hand, while a cornucopia of fruits is under her left arm. No laurel decks her lofty brow, but heads of wheat are there.



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Any subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

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ALFRED HOLMAN.....Editor.  
E. J. WICKSON.....Special Contributor.

San Francisco, February 9, 1895.

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## The Week.

### Weather and Crops.

On another page will be found reports to the State Weather Bureau from various parts of the State. They, naturally, speak enthusiastically of the outlook, now that clear, bright sunshine has followed the heavy rains. Since the dates of those reports the same conditions have continued, and a vast amount of field work is now being pushed vigorously forward in all parts of the State. We have moisture enough stored in the soil almost everywhere to carry forward for some weeks the growth which is now starting well, under the welcome heat. In some heavy soils it will be desirable at once to run the harrow and break up the crust formed by the heavy rains, so that too much moisture shall not be lost by evaporation and the young plant will not be choked by the baking surface. The gardening month is now on and as soon as hand and horse can be spared from the field or orchard, the garden spot—surety of home comfort and health—should be planted. Of course the beginning in this work should have been made months ago, but few did it. Do not double the mistake by letting it go until just before haying and then get little or nothing for the labor.

### Good Road Convention.

The movement for better roads is gaining good headway in California, and outholds promises of great accomplishment. The people are becoming better informed upon the striking economies involved in systematic and good road work as compared with the wasteful, extravagant method of temporary repairs to worthless highways which has existed in California as in other States. It is becoming clearer that to build well is to build cheaply, and that the future, which will enjoy its share of the work, shall bear its share of the expense. For each generation to waste its substance on poor roadways and then leave them, still poor, as a legacy to each succeeding generation is as poor a line of business as sensible people can engage in. We doubt not these facts will be forcibly set forth at the Road Convention which assembles in Sacramento during the last three days of this week. Unusual interest has been manifested in this convention. Several boards of county supervisors have decided to attend the convention in a body, and will learn lessons of immense value, no doubt. Other counties will send delegations, and other progressive organizations like the agricultural societies, boards of trade, the great universities and the like will also be represented. It is very timely that such a notable and representative body of Californians should convene at the capital during the session of the Legislature. It will not only be effective in promoting any legislation that may be desired, but the Senators and Assemblymen generally will

be imbued with good-road fervor and show the effects of it when they reach their distant homes. The convention will also have a national feature, as the representative of the good roads department of the Government at Washington will take part in the proceedings.

### Frozen Oranges Abroad.

And now comes the report that the orange region of the Mediterranean has gone to meet the Florida semi-tropical belt. Cable advices from Valencia on February 6th were to the effect that the entire orange crop has been damaged by the cold wave that visited that section the night before. Conservative estimates place the loss at about sixty per cent. The Valencia oranges are in great demand in New York at the present time, owing to the recent damage to the crop in Florida. Valencia oranges have all advanced fully \$2 per case. At the New York Fruit Exchange it was stated that several well-known importers received information that the cold wave was very severe in Valencia, and that the mercury registered about 10° above zero. This is a little worse than Florida, but it all goes to clear the way for the California fruit which is now going forward in immense quantities and in splendid condition. How free California has been from frost menaces this winter is seen in the fact that a Riverside manufacturer of "electric frost annunciators" has found, this winter, no market for his wares. He should look up the Florida and Valencia trade. California seems to have as little use for frost alarms as she has for lightning rods.

### State Board of Agriculture.

We give on a following page as much of the report of the State Board of Agriculture as we can find room for. It contains very interesting information, and timely, inasmuch as the Legislature seems to want points on the operations of the Board. It will be seen that the imputation that undue expenditure is made for speed matters is cast aside, and an explanation of the recent arraignment of the Board by the Controller is also set forth. At the meeting this week in Sacramento Mr. C. M. Chase, of this city, was chosen president for the coming year. Mr. Chase has been on the Board for the last fifteen years and has been one of the most earnest and devoted of the directors. His election to the presidency is a compliment merited by long service.

### Directors State Fruit Exchange.

The adjourned annual meeting of the stockholders of the California Fruit Exchange assembled at the rooms of the State Board of Horticulture on Thursday of last week with a large majority of the stock represented. After attending to the necessary routine business, the following stockholders and fruit growers were unanimously elected directors for the coming year, the five last named being new members: B. F. Walton, Yuba City; John Markley, Sonoma county; C. C. Thompson, Pasadena; D. T. Fowler, Fresno; Philo Hersey, Santa Clara; W. J. Dobbins, Vacaville; J. A. Webster, Vacaville; F. M. Richter, Campbell; R. Frisselle, Bakersfield; D. W. Parkhurst, Fresno; H. C. Morrell, Wrights. The new board meets for organization in this city as we go to press.

## From an Independent Standpoint.

No other demand upon the courage and resources of San Francisco has ever met with such response as the call for funds for the San Joaquin Valley railroad. When we wrote last week the subscriptions, including the seven hundred thousand starter from the Spreckels family, amounted to just above one million. To-day, one week later, they amount to upwards of one million eight hundred thousand, and there is no doubt that the final total will go far beyond the two million mark. Although the work has been undertaken by San Francisco alone she will not be permitted to monopolize the whole credit of its execution. Oakland offers to raise two hundred thousand dollars; Stockton pledges one hundred thousand; and other towns will give in proportion to their means. The movement has gotten beyond a mere business project—it is an awakening of public spirit, a declaration of independence by the city and the great valley.

The immediate effect has been to rouse San Francisco to a sense of responsibility in her relations to her tributary country; and almost for the first time in her history her property holders are admitting that they owe something to the interior. At one of the city clubs last week a gentleman declared that from the earliest days until now San Francisco had pursued a grossly selfish policy toward her tributary districts, pointing out

that she had built no factories for the consumption of raw products, that she had made no connections abroad, that when the interior needed capital for its development it had to find it in Europe or in the East, that the city sat in the middle of the road and exacted toll. A year ago such a charge would have been resented with contempt. Last week its truth was frankly allowed. There is much in this acceptance for the encouragement of the interior, for it involves a radical change in policy on the part of San Francisco. The San Joaquin Valley road is the first effect of this change, and other efforts of the same sort may reasonably be expected to follow.

If San Francisco is to re-establish herself in the old relations to the country, she must make it more easy and profitable for the country to deal with her than to deal elsewhere. It is the policy of the Southern Pacific to divert the trade of the interior to the East; it must be the policy of San Francisco to hold it for herself. The city has a prodigious advantage in the open sea; now let her make the sea available by building roads into the interior.

The joint legislative committee on reform, working presumably in harmony with the Governor, has brought in a measure designed to bring official dereliction of every sort to the light. A Commission of three members is proposed, with authority to sit at such times and places as it may elect, with powers to command the presence of persons and papers, and with authority to examine into the administration of public affairs from the Governor's office down. It is, in fact, to be a sort of jury of inquisition, but its functions are limited to the making of reports. It can expose; but indictment and punishment is left to the courts. Such a Commission could look into election frauds, investigate charges against the police administration, investigate the working of any State department—in short, keep an open eye on public affairs. It is provided that the Commissioners shall be named by the Governor and approved by the Legislature; that one shall be a Democrat, another a Republican and the third a Populist; and salaries are limited to five dollars for every day in which the Commission is actively employed. Of course, the value of such a Commission must depend entirely upon the character of the men appointed as its members; and it is in this connection that opposition shows itself. The *Chronicle* is making a fight against it on the pretext that the Governor may appoint unworthy men and that the Commission may thus become an engine of partisan persecution. This, it appears to the RURAL, is a very narrow and prejudiced view of the matter and one which, carried to a conclusion, would absolutely bar the effort now making for reform in State affairs. There is certainly great need for such work as it is proposed to put upon this Commission; there is no ground to doubt the Governor's sincerity in his reform propositions and are willing to trust his judgment and conscience in the matter of naming the Commissioners. This, we believe, will be the view of the public generally. Of course, all who find the system of corrupt politics profitable will join in the effort to beat this or any other plan looking to its exposure.

The defeat of the Reilly Funding bill—a measure designed to allow C. P. Huntington et al. to evade payment of their indebtedness under the transcontinental railroad bonds and to throw it upon the Government without recourse—is accounted a great triumph for justice over a clique of financial jugglers. The bonds are now about to fall due and it remains for those in authority at Washington to bring the just debtors to the scratch. The gold reserve in the United States Treasury has gotten down close to the fifty million mark and it is authoritatively announced that the Administration proposes to issue another series of bonds, this time in the sum of \$100,000,000. This is to be done in conformity with the policy of the President, who has officially declared that he will issue bonds as long as there is anybody who will buy them, to keep up the system of gold payments. It is his hope that this proposed issue will tide the Treasury over to a time when the receipts of the Government will meet its expenses. In view of the abandonment of the Carlisle financial proposition and the scant courtesy accorded to the new plan proposed by Mr. Cleveland, Mr. T. B. Reed has come forward with a plan of relief which has at least the merit of simplicity. He proposes, in case the Treasury becomes exhausted, that the Treasurer be authorized to meet Government obligations with due-bills, drawing three per cent interest. He argues that such bills will readily be accepted; that it will stop the transfer of gold for paper; and that it will obviate any danger of a financial crisis. The joint legislative committee on retrenchment last Monday night at Sacramento cut off the heads of some twenty or more useless employees. So far, good, but the same reasons apply to a hundred more. Let the good work proceed until the "contingent" expenses of the Legislature are brought down to a legitimate basis.



## California State Board of Agriculture.

## A Carefully Prepared Annual Report.

Over the signatures of Hon. John Boggs, president, and Ed F. Smith, secretary, the State Board of Agriculture this week submits its annual report to Governor Budd. It is a carefully prepared document entering quite elaborately into the discussion of the present standing of the agricultural industries and the conditions affecting them. It is impossible for us to follow the report into its discussions. Many of its subjects have already been freely commented upon in our columns. We choose rather to present such parts as seem to us to bear most directly upon pending issues in the work of the society and in farm interests.

**The Wheat Crop.**—At the close of the season of 1894 we find the condition of the agriculturist even worse than at the end of the preceding year, although we believed and hoped there would be a marked change for the better. We based such belief upon the estimated requirements of countries importing our breadstuffs. Much to our disappointment, we find that early in the season of 1894 Russia concluded a commercial treaty with Germany, by which the latter country reduced the duties on cereals one-half. This reduction reopened the German market to Russian rye, which takes the place to a great extent of wheat formerly imported by Germany from America; hence, in describing the season just closed, due consideration must be given to this and other conditions adverse to the farmer. Low prices—the lowest for agricultural products ever before known—followed necessarily by shrinkage of values, have left the foundation of America's progress sadly shaken, and followers of the vocation of agriculture in a condition of demoralization and disgust.

The yield of wheat in California for the season was 26,071,510 bushels—a falling off of 5,893,049 bushels from the preceding year. The acreage seeded was but about 400,000 less. The difference of yield is solely due to the inequality of the rainfall. The amount of wheat raised in California this season, under the unfavorable conditions as shown, greatly exceeded the expectations of our most competent judges, whose estimates were made early in the season.

With the maturity of grain of all kinds, prices relaxed to an extent never before experienced in American agriculture.

**Cost of Wheat in California.**—We have propounded a series of questions to about 300 of our wheat-growers in different counties of the State as to the cost of production and their ideas as to the use of wheat for feed, asking at the same time for opinions from them as to the future of wheat growing in California, and any other practical observations as their experience might suggest. The replies received were nearly 100 in number.

The average of all the reports received as to the cost of wheat raised and in the sack, including seven per cent interest upon value of land upon which raised, also wear and tear of equipment with different yields, shows thus:

Yield of 10 bushels per acre, 70 cents per bushel.  
Yield of 15 bushels per acre, 55 cents per bushel.  
Yield of 20 bushels per acre, 44 cents per bushel.  
Yield of 25 bushels per acre, 39 cents per bushel.  
Yield of 30 bushels per acre, 35 cents per bushel.  
The highest and lowest average cost per bushel, given by counties, under the five different yields named, and the average value per acre, by counties, of the land upon which grown, are shown as follows:

| HIGHEST AVERAGE. |                          |                                    |                         |
|------------------|--------------------------|------------------------------------|-------------------------|
|                  | Yield per acre, bushels. | Highest cost per bushel, in cents. | Value of land per acre. |
| Santa Cruz       | 10                       | \$1 26                             | \$100                   |
| Santa Cruz       | 15                       | 89½                                | 100                     |
| Santa Cruz       | 20                       | 71½                                | 100                     |
| Santa Cruz       | 25                       | 60½                                | 100                     |
| Santa Barbara    | 30                       | 60                                 | 30                      |
| LOWEST AVERAGE.  |                          |                                    |                         |
|                  | Yield per acre, bushels. | Highest cost per bushel, in cents. | Value of land per acre. |
| Los Angeles      | 10                       | \$0 22                             | \$15                    |
| Stanislaus       | 15                       | 32                                 | 37                      |
| Monterey         | 20                       | 21½                                | 20                      |
| Monterey         | 25                       | 19½                                | 20                      |
| Monterey         | 30                       | 17½                                | 20                      |

The average value of land in the twenty-four counties from which replies were received shows \$38 per acre—a much larger average than land in Kansas, where \$19.35 was the figure their lands averaged.

Our valuations range as follows: One hundred and seventy-five dollars per acre in Santa Cruz; \$100 in Mendocino; \$60 to \$80 in Butte; \$30 to \$80 in San Joaquin; \$60 in Solano; \$70 in Sonoma; \$25 to \$60 in Colusa; \$30 to \$60 in Monterey; \$12 to \$40 in Tulare; \$50 in Napa; \$10 to \$30 in Stanislaus; and \$10 to \$20 in Tehama.

It is plain to be seen that a majority of these values are out of all proportion to the returns received; hence it is quite apparent that values thus figured upon do not give the true cost of production. No one would think of buying these lands at values given with cost of production as much as here given. These figures are given to show that the farmers are not figuring upon a proper basis of value.

In a majority of replies to the question, "How

many bushels per acre should land yield to make wheat growing fairly profitable at one cent per pound?" the answer is forty per cent higher than the average of the county for the past five years; and to the question following, "What proportion of the county now yields that amount?" the reply is from ten to twenty per cent. It is to be hoped that these figures, when carefully read by the producer, will have the effect of showing him that this system is all out of shape.

**Fruit Interests.**—The report discusses at length the condition of the fruit interest commercially, which has already been fully elucidated in the *RURAL PRESS*. An outline is also given of the transactions of the Fruit Growers' Convention in Sacramento, which we have also reported. The State Board of Horticulture is highly praised for its work in the fruit interests.

**Dairy Interests.**—The estimated value of the products of the dairy in this State for 1894 was \$14,500,000, placing this fast increasing industry second only to wheat in the line of product values of California. With the decrease of our wheat crop which must follow, the attention of our farmers will necessarily be turned to make use of a portion of their lands for other purposes than wheat-growing, and it is safe to say that the dairy interest will be notably increased by the change, as it is one of the diversities of farming that will warrant increased attention.

All these things mean that every farmer will keep from ten to twenty good cows, and to meet the demand co-operative creameries will be established in neighborhoods where the milk from 500 to 1000 cows can be obtained. Again, this change means more prosperity for the farmer, improved roads, enhanced valuations of land, and more attractive and comfortable homes. Further, the keeping of more cows by the farmer means an increase in the number of hogs to be raised, fattened and marketed. With more and better hogs the demands of this coast will be supplied, and \$1,500,000 which is annually paid for imported hog products will be kept at home. Contemporaneous with this will come the founding of dairy schools, the holding of dairy conferences, teaching the true principles of breeding dairy animals, feeding and dairy science in all its branches, and generally enlightening and educating farmers and dairymen in the most useful, healthy and happy occupation.

The most liberal legislative policy toward this great industry should be urged, to the end that generous appropriations be made for the establishing of a State Dairy School and to provide for its maintenance; also, that stringent and effective laws be passed which will prohibit the manufacture and sale of dairy products colored in the semblance of pure butter, and to provide for the appointment of some officer who will see that the laws are enforced.

Oleomargarine and butterine will never sell on their merits, and whenever the manufacturer is compelled to prepare the fraudulent stuff in a manner that will advise the consumer of its true character, pure butter will have nothing to fear; the ruinous competition that pure butter is now compelled to meet will disappear.

**Dairy Needs.**—There is need for more advanced education in all lines of agriculture, but none more so than in the dairy department. In one respect, particularly, dairymen are not awake to their interests, and that is they do not realize the importance and necessity of improving their herds of cows by the introduction of the best blood of the most noted and recognized breeds of special-purpose dairy cattle—the Holstein, Jersey and Guernsey—but are content with the scrub. Instead of the 300-pound butter cow they continue "scrubbing" along with a herd of cows whose annual product will not exceed 125 to 150 pounds of butter per cow. It is not essential to success that the herd be composed of thoroughbred animals, but, unless every cow in the herd has a goodly proportion of the blood of some special-purpose dairy breed, the chances of success are materially lessened.

Do no use in the herd an inferior bull, even if he be a thoroughbred; but under no circumstances use a scrub. Every dairyman's aim should be to have a herd of dairy cows, each of which is capable of producing 300 pounds of butter per annum. Since Dr. Babcock has given the world such a simple and inexpensive, yet accurate, process for determining the amount of butter fat contained in milk, there can be no excuse for any dairyman keeping unprofitable cows. Weed out, breed up and feed up the dairy cow until the dairy industry of California has become the most profitable and most important of any in the State.

**Competitive Tests.**—The State Agricultural Society annually provides for a competitive test as to butter qualities of individual cows by the Babcock test, and we are proud of the fact that at the last exhibition of this society California again demonstrated her ability to excel in the production of live stock, and led the whole world for the year 1894 in the yield of butter from one cow in a three-days' contest at the State Fair. The Jersey cow Lady Woods produced in this contest 7.879 pounds of butter fat, equal to 9.85 pounds of marketable butter—over three pounds per day—a most remarkable yield and a most phenomenal cow. In this showing we not only lead the

great States of Wisconsin, Ohio, Indiana and Illinois, wherein similar tests were made last year, but the entire world. It is our purpose to push these milking contests each season until it is clearly demonstrated to breeders what may be accomplished and what may be saved by making these actual tests.

**Comments Upon State Fair Interests.**—The industrial section of the exhibition of 1894 was up to the average and gave the representatives of the various mechanical products an opportunity which was largely taken advantage of, to show improvements in their wares.

The livestock department steadily increases in both quantity and quality, and it is estimated that the annual sales of stock made at the State Fair for the past fifteen years have averaged \$50,000 per year. The result of one race at the State Fair in 1888 caused the immediate sale of the winner (Woodnut) for \$20,000. Had the owner been less anxious to sell, he could have realized within a couple of months thereafter double this amount, as was evinced by the subsequent sale for \$50,000 of another contestant (Stanboul) in the same race, and the refusal of \$75,000 for the stallion Guy Wilkes, that also took part in the same event.

It should be remembered that these prices were paid and offered for prospective producing qualities alone, as neither has been raced since that year, and still there appear periodically denunciatory criticisms upon horse racing at agricultural fairs.

Racing at fairs is not, as many are inclined to believe, a tax upon the State. Not one dollar of State money is used for this department of the fairs, and although more space is given to racing by the daily press, it does not comprise the entire State Fair, nor does it return much more in admission fees than the pavilion part of said exhibition. But the press gives great space to the racing department each year, and why? The great papers of the day claim to publish only such matter as is of the utmost interest to the reading public. Now then, if the public did not take an interest in racing the newspapers of the day would certainly not give it the prominence they do. Let the daily press illustrate and make more prominent the exhibits of agricultural products or other industries of the State that form an equally prominent part of the annual fairs, and the praise of which is confined to a short review or to individual expressions of opinions by visitors, and we venture the assertion that the masses would soon condemn any newspaper that failed to give them a detailed account of the usual races held at the State Fair. It is of the great racing contests the people want to read; it is the inherent desire of man to excel, whether it be at a spelling match or at a horse race. However, California is no sufferer in a productive sense by the prominence given to racing. Has she not outshone in breeding of high-class horses the great States of the Union that held sway so long in supremacy of soil and climate for the breeding of race horses? Is there a citizen of this State, having her productive welfare at heart, who is not proud of California when he reads of the achievements of her equine produce each season throughout the land?

**The Society Misrepresented.**—The Secretary of the State Board of Examiners in his report recently submitted, for the two years ending December 31, 1894, reviews to some extent the appropriations and other matters pertaining to this society. On page 54 he recites, in relation to the efforts of the Board of Examiners to reduce in volume and increase in value the reports of this society, that "it is quite difficult, as we did not seem to have the co-operation of the society."

This is not the fact.

The facts are that the Board of Examiners desired this society to take the responsibility of cutting down the reports of the district societies, as submitted to us for 1893, while we deemed it proper that the Board of Examiners, having full control of all matters of printing, should give us authority to act, which stand on our part caused the passage of the resolution appearing in said report, denying the district societies privilege to print reports sent in.

Acting under these directions, we returned reports to various district associations, with a copy of the resolution directing compliance with the law. We are, and always have been, most eager for a system of collecting statistics, as may be seen by reference to former reports of this board. Our desire is, and always has been, to make these reports as valuable as possible.

On page 55 of the same report another invidious reference is made to the State Agricultural Society, and which is misleading. Following the tabulated statement of district appropriations showing amount received and the proportion expended for premiums, a paragraph added says the "State Agricultural Society has cost the State, since 1880, \$390,000." Would it not have been just as proper to show what this money was used for, as in the case of district associations? A few lines of about this character would have explained to the people and members of the Legislature exactly how we cost the State this money.

"The appropriations made for the State Agricultural Society since 1880 are \$277,800. The printing charged by the State to their account was \$111,353.90. Of this amount, \$192,163.58 was



awarded in premiums; \$60,000 was used in the construction of the new Agricultural Pavilion, the property of the State, leaving about \$25,000 for care and insurance of State property for fifteen years."

This, in our mind, would have been a more explicit way of showing how the institution had cost the State the amount named. We challenge comparison with any other State institution. The amount of printing seems large, but we know that nothing was ordered printed that was not necessary and of benefit to the State. Our list of cash premiums for the period named are as follows: 1880, \$6502; 1881, \$6603.65; 1882, \$8651.36; 1883, \$8915.50; 1884, \$11,467.28; 1885, \$13,612.27; 1886, \$13,370.58; 1887, \$14,538.92; 1888, \$14,256.98; 1889, \$17,056.19; 1890, \$15,761.45; 1891, \$17,628.10; 1892, \$17,106.79; 1893, \$13,244.76; 1894, \$13,447.75; total, \$192,193.58.

### How to Stop Gopher Holes in Levees.

#### A Timely and Important Suggestion.

TO THE EDITOR:—Our levees on the Sacramento, American and Feather are better than any that I have seen on the Mississippi, and as good, and in some places better, than any I saw on the Rhine or in Holland. The rivers seldom overtop our levees, and the great fear comes from washing by strong winds, eddies, currents and gophers. The latter cause more genuine fear than all the others combined.

The width of the levees on top, on the rivers that I have mentioned, varies from eight to twenty feet, with an outer slope from three and four feet wide to one foot high, and on inside two to one.

When water is discovered running through a hole as large as a fire plug in the city, and the water in the river is from six to eight feet above the level of the land, it has a tendency to make most people uneasy, and they are liable to lose their heads unless the water is stopped very soon. If the land is of adobe nature or clay and sediment there is no immediate danger, for it can discharge for several days without materially enlarging the hole. But if the land is sandy or quicksand the sooner it is stopped the better.

It can be readily ascertained whether the hole is increasing in size, by taking a bucket and catching some of the water and allowing it a few minutes to settle. If the water is more rily in the bucket than in the river, then all haste should be made to stop it. On such occasions every one present wants to stop the water, and will work with a will; but about one-half lose their heads, and the other half work without a correct system and independent of each other.

Before the rain comes in the fall all the weeds, trash and brush should be cleaned from both sides of the levee. When the water is found running through a hole, take a shovel and follow up the water into the levee as far as it will do without endangering the caving in of the levee. Then take a small stick and run into the hole, to learn if possible whether the hole runs up, down or across the levee. When the angle is ascertained as nearly as possible, send a man with high-top gum boots into the river at that angle with a stout cane to steady himself, and let him stamp around and try to find the hole. At the same time have some one watching the water to see if it changes color or grows less.

When the hole is found, stamp as hard as possible and put a sack of dirt on top.

Frequently the hole will start so low down on the levee that it cannot be reached with a pair of gum boots. If the levee is clear from weeds and obstructions, take a piece of cotton cloth, say 4x6 feet, and fasten to the top ends of two long poles flag fashion, moving it up and down the levee under the water, and when over the hole it will be drawn in.

If these tests fail there is a sure way of finding it, but more laborious. Sink a trench two feet wide and six or eight feet long, four or five feet from the inner edge of levee; the center of trench nearly opposite the angle you think the hole runs. Go down with the trench until the water is found, and go fully a foot deeper to be sure you are below the runways. If digging is stopped as soon as water is found, and the hole is filled with empty sacks and sacks of dirt, ten to one it will break out again and all the material will have to be taken out.

Do not lose any time trying to stop the water on the river side of the trench, but put all your energy in putting loose sacks in the hole on the land side of the trench, stuffing them in with a short, stout stick until the water is shut off.

Fine oat hay or coarse manure is a good thing to put over the sack, then a sack or dirt. If these trenches are properly dug and well filled they will not hurt a good levee.

I do not advise sinking these trenches, especially in a narrow levee, except as a last resort. There is great danger in narrow levees of their becoming honeycombed by long residence of large families of gophers. These honeycombs become saturated with water and the whole thing slides out.

I would treat a honeycomb by sinking a trench down through it and packing the dirt back behind the digger and stamping down as hard as possible. Like all other dangers, keep cool and your wits about you.

DANIEL FLINT.

Sacramento.

### Rainfall and Temperature.

The following data for the week ending 5 A. M., February 6, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA<br>STATIONS. | Total Rainfall for the<br>Week | Total Seasonal Rain-<br>fall to Date | Total Seasonal Rain-<br>fall Last Year to<br>Same Date | Average Seasonal Rain-<br>fall to Date | Maximum Temperature<br>for the Week | Minimum Temperature<br>for the Week |
|-------------------------|--------------------------------|--------------------------------------|--------------------------------------------------------|----------------------------------------|-------------------------------------|-------------------------------------|
| Eureka                  | 28.73                          | 36.30                                | 23.00                                                  | 58                                     | 38                                  |                                     |
| Red Bluff               | 22.30                          | 15.47                                | 16.60                                                  | 70                                     | 34                                  |                                     |
| Sacramento              | 10.70                          | 9.83                                 | 12.21                                                  | 62                                     | 40                                  |                                     |
| San Francisco           | 19.66                          | 13.31                                | 15.16                                                  | 64                                     | 42                                  |                                     |
| Fresno                  | 9.62                           | 4.16                                 | 7.22                                                   | 62                                     | 34                                  |                                     |
| Los Angeles             | 11.22                          | 5.58                                 | 12.17                                                  | 76                                     | 36                                  |                                     |
| San Diego               | 9.64                           | 3.37                                 | 5.95                                                   | 66                                     | 38                                  |                                     |
| Yuma                    | 2.90                           | 1.42                                 | 2.30                                                   | 74                                     | 38                                  |                                     |

### Weather and Crops.

#### General Conditions Favorable for a Year of Great Production.

Director Barwick of the California Weather Service, for the month of January, summarizes as follows:

The average temperature for January was for San Francisco 48°; Eureka, 46°; Red Bluff, 44°; Sacramento, 46°; Independence, 38°; Fresno, 46°; San Luis Obispo, 50°; Los Angeles, 52°; and San Diego, 54°.

As compared with the normal temperatures there was a deficiency of heat of from one to two degrees, except at Fresno and San Diego, where an excess of two degrees and one degree respectively were reported.

The total precipitation for January was for San Francisco 7 inches; Eureka, 9.40; Red Bluff, 8.30; Sacramento, 8.42; Independence, 1.20; Fresno, 4.10; San Luis Obispo, 8; Los Angeles, 5.80; and San Diego, 7.30.

As compared with the normal precipitation, there was an excess reported from all quarters of from 5.34 inches at San Diego to 2.02 inches at San Francisco, there being but one point in the State reporting a rainfall less than the normal, and, strange to say, that point was Eureka, Humboldt county, where .13 of an inch less than the normal is reported.

The deficiency in temperature has caused no damage from frost, nor has the excessive precipitation done any material damage excepting the flooding of some valuable lands along the Sacramento river, which will be planted to crops later on in the season. The frosts in some localities have checked the rapid growth of feed, and, in consequence, stock will suffer to some extent.

Following are detailed reports as made to the central office at Sacramento almost in full:

All crops above the overflowed ground in the Sacramento valley are in excellent condition.

The outlook in the San Joaquin valley is indeed very promising—in fact, it is the first time in many years that such good prospects are reported from the west side of that valley. Even the dry county of Inyo reports everything as looking very promising.

Most excellent prospects are reported from the entire portion of the State south of Tehachapi mountains. Owing to the very copious rains during the past two months, there will be a large acreage of grain and hay sown and numerous new orchards will be set out. The reported floods in San Diego county were much exaggerated in the press accounts at the time. Little damage has resulted therefrom as compared with the great benefit derived from the thorough soaking of the soil by the limpid liquid fluid that so bounteously fell from the skies, while the mountain tops are deeply covered with snow, thereby insuring an abundant supply of water for irrigation purposes during the dry summer season.

The weather during the month has advanced the prospects of the agricultural, horticultural and viticultural industries of this State, for the slight damage caused by the abnormal monthly precipitation will be greatly overbalanced from crops of all kinds that will be abundant on the higher and drier mesa lands.

San Joaquin county has for the first time in her existence shipped oranges by the quantity, as a carload left Acampo the latter part of the month.

ALAMEDA (Livermore)—No damage whatever done by wind or rain. Crops are in fine condition. Rain delayed the putting in of crops, and there is about one-third of the land yet to be tilled, but it can be put in now, and with spring rains there is sure to be good crops. (Niles)—There has been no plowing in this valley until the last week of this month owing to the continuous rains. The low lands will not be fit to plow for two or three weeks. The continued frosts of the past week have checked the growth of grass, which will be injurious to stock. The rainfall for the past month has been 0.81 inches.

(San Leandro)—Since the rains ceased on the 23d the ground has dried so that plowing is now in order. Early peas and beans are doing nicely and a few are beginning to blossom.

BUTTE (Durham)—Most of the early-sown grain is looking well, but much of the late-sown wheat is drowned out. Very little winter planting has been done in this locality. Highest and lowest temperatures, 62° and 30°. (Palermo)—The rainfall has been heavy; but, aside from detaining orchardists from work, no harm has resulted. The ground has dried, and farmers are plowing and planting. Highest and lowest temperatures, 64° and 27°. (Biggs)—The crop of wheat looks fair. There was too much rain at one time, causing some damage in places; also some damage from floods and water standing in low places. I think the loss is from two to eight per cent. This is west of the railroad, in Butte county. East of the railroad to the foothills there is better drainage and less loss. If weather keeps dry for two weeks, will regain most of the loss. Grain and grass are growing fast.

CALAVERAS (Milton)—Continuous rain and wet ground have delayed winter seeding and been unfavorable for stock. Still, absence of excessive cold and frosts gives good feed. But warmer and drying weather is needed for this and putting in the winter crops. Summer-fallow looking well.

COLUSA (Colusa)—The weather has been favorable to crops in general, though some places have suffered from the overflow. The high winds have caused the water to wash over the levees and in many places wash them away. On the other hand, the winds have been beneficial in drying the ground. Crops not overflowed are in good condition. (Williams)—Seeding has been retarded; but, on the whole, conditions in this vicinity are favorable. (Grand Island)—No crops put in yet in this vicinity. Farmers have not plowed much on account of so much rain. The overflow of our best land (tules) is very great. Many thousands of acres under water, and no outlet. (Sites)—Heavy frosts at night retard the growth of grain. The frost, while it checks the upper growth, does not affect the roots, which may have the effect of making the grain stool out all the better, so may be of more benefit than harm.

FRESNO (Easton)—Wheat looking well; outlook favorable for large growth of weeds as grain was sown dry; apricot trees full of buds; linnets which destroyed so many apricot buds last season have not yet put in an appearance; vine pruning and tree planting is active. (Huron)—Crop prospect never better. Out of some 16,000 or 17,000 acres in grain, about 12,000 acres have been flooded by water from the mountains west of Huron. Prospects show that we will have the largest crop ever raised on the west side. Had several white frosts lately, but no damage. (Fresno)—Rain has delayed plowing and grain planting, but has been sufficient to insure a grain crop in the dry west side section. Frost has done no damage. (Reedley)—Owing to the excessive rains, very little seeding has been done except the last few days of the month. Some farmers are seeding, but the ground is too wet. There will be a great deal of land summer-fallowed, as it will be too late to seed when it is dry enough to plow. Prospects are first-class for abundant crops. Summer-fallowed wheat is looking especially well.

GLENN (Fruito)—The acreage will fall below the average on account of wet weather. The grain already sown has not been damaged to any extent around here, as the water runs off and does not stand and drown the grain out. The north wind is what the farmers want, enabling them to plow. Crops growing finely the last few days.

HUMBOLDT (Eureka)—Almost continuous wet weather up to the 23rd, retarding all farm work, but beneficial to young fruit trees. Dry, clear weather from 24th, and all outdoor work is now progressing rapidly. Grass in prime condition and stock doing well. (Hydesville)—December and January very wet, too much for farm work. Last week of January it cleared off and all farmers are busy. Lots of snow in hills on high ground but no damage to stock yet.

INYO (Independence)—Amount of rainfall for the month, 1.34 inches, an excess of .02 of normal. No damage from high wind or frost reported. Alfalfa growing nicely, and with the great amount of rain in valley and plenty of snow on mountains a good crop is assured.

KERN (Bakersfield)—The past month has been more than usually favorable for all kinds of farm and orchard work. There have been but three days too wet to work outdoors. No bad storms of any kind. A much larger area than usual has been sowed to alfalfa and grain and there does not appear to be a cloud in the sky of assurance that there will be a bountiful harvest. We depend for a supply of water on the snow in the mountains, of which there is more than usual. Orchards and vineyards have a promising outlook. No damage has been done to crops either by frost or high winds. More than an average amount of rain for this section. Crops of all kinds look promising, especially grain and alfalfa.

KINGS (Hanford)—The rains of the past month have done Kings county nothing but good. Crops are in fine condition, and we confidently expect an abundant harvest.

LOS ANGELES (Claremont)—The general healthy condition of crops remains much as reported last month. No damage has been suffered by the light frosts, unless perhaps by tender plants in most exposed places. Oranges are ripening fast, and are not only a large crop, but an unusually excellent one. (Covina)—Oranges are somewhat forward, packing going on at the rate of about six carloads daily; quality good. Lemons about average crop. No damage to crop from rain or frost in this vicinity. Strawberries are light as yet. The general crop will be ready to pick in about two weeks; however, picking is going on regularly. The lemon acreage will be largely increased this season. (Neenach)—Ground in good condition; growth retarded by frost, but not enough to do any damage. (Pasadena)—Very little of the rain ran off, and this abundance of moisture assures good crops. Warm, sunny weather is now earnestly desired. Oranges a good crop, of excellent quality. Outlook splendid. No killing frosts to date.

MADERA (Raymond)—Crops in fair condition. Heavy rains have damaged them to a small extent. (Berendo)—Fair prospects for good crops in this neighborhood. No damage done by winds, etc.

MERCED (Livingston)—Crops in this vicinity are doing fine. The wheat and rye have grown so fast that the farmers have had to turn their stock on them to feed them down. The weather has done no damage in this section. The frost we have had lately is a good thing, as it keeps the grain back some. (Los Banos)—The rains have improved the crops very much. The stock has fine pastures. The acreage of wheat much larger than last year. The farmers expect to harvest a large crop this summer. (Volta)—Favorable conditions continue, though excessive moisture in ground prevents seeding.

MARIPOSA (Mariposa)—Summer-fallow looks well. Winter-sowed is damaged to some extent in low, wet situations. There is only about one-half of usual amount of grain sowed, as, on account of the prolonged rains, people could not plow. If dry weather prevails now for a few weeks, the usual amount of land will be sowed, and the promise for a good crop is fair if there are the usual amount of spring rains. Grass looks well, although the late cold weather keeps it back. Nothing can be said as yet as to the fruit crop.

MONTEREY (Jolon)—Good weather last of month, with frost and ice, but warm days. Much land that was too wet from heavy rains is now being plowed and sowed.

MENOCINO (Ukiah)—Crops never looked better at this date than now. Early heavy rains enabled farmers to plow and sow nearly all the uplands, which continued warm rains have brought forward remarkably. But little bottom land has



been sown, and that little early, and generally looks well. No considerable damage from freshets and none from high winds. Grass is a month earlier than usual. Fruit trees more backward than often the case. (Hermitage)—Since it stopped raining we have had three heavy frosts. It is making the grain and grass look yellow.

NAPA (Napa Junction)—Early grain in good condition; late, somewhat damaged by excessive rains. Fruit in good condition.

NEVADA (Chicago Park)—Continued stormy weather has prevented any crops being put in. Such as are in are now covered with six inches of snow. The soft condition of the ground in connection with high winds this month has caused many fruit trees to be loosened and bent over.

ORANGE (Loomis)—Orange crop of this vicinity will be about 350 cars, mostly of excellent quality. The seedlings run smaller than usual in size. A large acreage in barley is being put in. Wet weather has caused some extra working of land, and cutworms have obliged replanting in some cases. The general prospect for a large yield of farm crops and feed on pasture lands could not well be better.

PLACER (Loomis)—The rain has done no harm in this section; only put back grain already in, and may drown out a little in low spots. Pruning is a little late, as ground is too wet to go on. (Weimar)—The crops are not injured in any manner.

RIVERSIDE (Perris)—Small grain is stooling finely. No damage as yet from frosts. The fine rains insure us the largest crop of small grain ever raised here. Orange and deciduous fruit trees are looking well. No damage from insect pests nor the elements. All stock is in fair condition, but hay is high. Many have their gardens planted. (Riverside)—Ground well soaked. Grain crops doing nicely. Acreage cannot be well estimated, but will be large. Oranges in fine condition. Sub-tropical plants have been injured by frost, but garden vegetables little, if at all. (Arlington Heights)—A much larger acreage than usual has been planted to grain in this section, and is very well advanced. Potatoes are being planted for the early market. The orange and lemon trees are still growing. The orange crop is being shipped more rapidly and will likely be in full swing in a month. (San Jacinto)—Large acreage of grain in this valley this year. Prospects good for crops. Many farmers are still putting in grain. A large acreage is being planted to orchard. Excellent prospects for large crop of deciduous fruit. Weather has been all that could be desired the past two months.

SACRAMENTO (Ryder)—Crops in this section doing well. There has been quite a delay in plowing and planting. Sowing has commenced again, and if we have no high water in the spring the crops will be good on the island this year. (Franklin)—The high backwater has damaged the crops on the lowlands to a certain extent, and in some places they were completely drowned out. The heavy rains of this month, followed by heavy frosts, has formed a hard crust on the ground, which retards grain from growing somewhat. (Elk Grove)—Rain caused great deal of damage in low places, also in adobe ground. Wind damaged a few trees, also blew down barns and windmills. This cold snap is a help to the fruit industry, as the buds began to swell and now they have been set back. Grain is growing slowly. Ground is too wet to plow. (Union House)—Condition of wheat good. Late rains have not damaged growing grain to any extent, but will prevent farmers from sowing any grain for at least three weeks. (Clay)—Crops, wheat and oats, are improving with this warm weather, although backward for this time of year. Acreage is short of average. Ground is still wet from late rains. Farmers are beginning to plow again and if weather holds good for two weeks there will be a large acreage of barley sown. Have had some light frosts lately. Grass growing nicely.

SAN JOAQUIN (Bauta)—Crop prospects good. No damage has been done by rain and high winds. (Bethany)—The long spell of rain and cold weather has kept the crops back, and they are but little further forward than they were a month ago. (Lockeford)—The continued rain has injured the crops; that which is on high land is in fair condition, but on the low land the water has destroyed all signs of life. (Lodi)—No marked improvement in growing crops. The little that was sown early is doing well considering the weather. Continuous rain has filled the land with water; some is boggy and cannot be worked at present. The last few days some plowing and seeding has been done on high ground. Unless the present clear weather continues for some time, not one-half the usual acreage will be sown. Feed is growing fairly well. Nothing being done in orchard or vineyard. (Stockton)—Some grain land will suffer, but very little, as most of our black-land farmers sowed their seed early, and the grain is up and in good condition to stand rough weather. Coming at this time, this weather has been favorable for all crops in this vicinity.

SAN DIEGO (Nuevo)—Crops are looking fine since the heavy rain; a larger area planted this year than ever before. (San Diego)—The heavy rains of past two weeks have been of immense benefit in all parts of the county, the telegraphed press reports of damage being greatly exaggerated. From all indications this will be a banner year for the farmers, apiarists and fruit growers. (El Nido)—The hills are green, the grain is looking vigorous and people generally feel that the outlook for the coming year is a good one.

SAN BERNARDINO (Chino)—The month of January has given ideal crop conditions. While there has been no growing crop here except barley, etc., for hay and grain, the rain has come so opportunely and so generously that it assures all kinds of general farm crops. The prospects for a good beet crop have never been better in Chino. (Redlands)—Orange crop very fine. No damage whatever from rains or frost. Marketing going briskly forward. Prices for Navels \$2.25 per box, f. o. b. Largest area sown to grain and for hay ever known. Prospects good for large plantings of deciduous fruits. Many orange, lemon and grape fruit trees will be set out. Scarcely any damage anywhere from rain. Plenty of snow on mountains and irrigation water in abundance.

SAN LUIS OBISPO (Santa Margarita)—Dairymen, stockmen and farmers all agree and say that the coming season will be a prosperous one; about thirty inches of rain for season to date. (San Luis Obispo)—Abundant rains fell during the month of January, which retarded the progress of farm work, with this exception, the rains were beneficial, making feed for cattle very plentiful. The weather has not been cold and planted cereals are doing splendidly. Range grass is in fine condition. (Arroyo Grande)—Crops looking well. Rains have done little or no damage. Seeding is nearly all done. Two weeks of favorable weather will insure the wind-up of the seeding of the barley and wheat of the largest acreage ever put in in this vicinity. Pasturage is growing nicely, and stock is looking much better than is usual at this time of the year. Everything looks promising for a prosperous year. (Paso Robles)—All of the rains for January were warm, with but one exception. Cereals and grasses, except on some low land not well drained, was making a good growth when checked by freezes at latter end of month.

SAN BENITO (Hollister)—Crop prospect was never better. Continual wet weather has interfered materially with putting in crops, but the fine weather for the past few days has assisted the farmers greatly, and the prospect is that by the middle of February all the seeding will be done. No material damage has been done by the storms.

SANTA BARBARA—Weather for feed and early grain has been excellent until recently. Rains not excessive; as a whole very beneficial. (Carpenteria)—No high winds; very little frost. Rains have been fine—just what was needed. Promise of an abundant crop. (Los Alamos)—Crops not far enough

advanced to report upon. For the past ten days have had extremely cold nights, retarding the growth of cereals and vegetation. The land is getting in excellent condition again for cultivating and the farmers are taking advantage of the opportunity to finish seeding.

SANTA CLARA (San Jose)—All crops in good condition. No damage done by the storms. Grain is growing very nicely, but it is a little backward owing to heavy frost and ice since the clear weather set in. We need a few weeks of fair weather in order to set out young trees and to destroy some of the weeds in our orchards. Fruit prospects good. (Santa Clara)—Crops in good condition. Very little, if any, damage by high water to crops. (Evergreen)—The month of January has been very wet and, in consequence, has delayed plowing and seeding very much, and, in fact, all other outdoor work.

SANTA CRUZ (Watsonville)—12.12 in. rain for month; north-easterly winds. Rain did considerable damage to uplands. (Santa Cruz)—Very bright sunshiny weather; quite cold for most part. Four heavy, killing frosts, doing but little damage. Ground very wet from long and unusual rainy spell; farmers quite backward with plowing and seeding in consequence. Considerable damage resulted from heavy rainfall, in washing away fences and bridges. Pastures good, but grass very weak. Stock in fair condition. Prices of every kind of product very low. (Boulder Creek)—The weather has been favorable for good crops.

SONOMA (Forestville)—No farming has been done in this locality of any importance for about a month, and farmers are wondering if they will be able to put in some of their crops. Grain that was sown in November is suffering from excessive rains. Alfalfa is also injured more or less by the flood of 23d, which carried away fences, hop poles and bridges. This flood is one of the highest known here in twenty years, over-reaching the high-water mark by fourteen inches. In low places fruit trees are said to be injured and will be affected with "sour sap." Pruning progresses very slowly, the ground being so soft and miry that it is impossible to rush the work. (Petaluma)—During the many weeks of rainy weather but little damage of any kind has been done to the crops, while on the other hand they have not improved very much; but the last week of fair weather and sunshine has benefited them wonderfully. Hundreds of acres ready, but not sown, will soon be seeded if this weather continues. Feed excellent. (Sebastopol)—Grain promises well. Peach trees made large growth in 1894, and outlook for large crop good. Too early to report on apples, although large crop not anticipated. (Sonoma)—The frost has somewhat damaged the hay and grain fields, but for all that there will be a good yield of hay, wheat and barley in Sonoma valley the coming season. The fields are covered with a mantle of green varying in height from six to twelve inches. The fruit outlook is very promising, and, with favorable weather in March and April, there ought to be a large yield. Vineyards are also being pruned and staked, and there are prospects of a fair crop. The dairy interests in this valley, so far as feed is concerned, never looked brighter. Feed for stock has been plentiful ever since last November, owing to the early rains and the growing weather of that month and December.

STANISLAUS (Westley)—The condition of the crops is good. No damage was done by the weather in this vicinity. (Turlock)—The month generally has been too wet with not enough sunshine to be favorable to crops. The unusual rainfall has drowned out the grain in all the low places, making the crop much shorter than usual. All the heavy land east of the railroad track is only half seeded at present, on account of the weather being too wet. (Crow's Landing)—No damage done by high winds or excessive rains. Several severe frosts, but no damage done. Cereal crops looking fine. Farmers finishing seeding; they feel assured of good crops.

SOLANO (Tremont)—Grain and fruit prospects good. Slight damage to grain in low places. Light frosts of nights very beneficial to fruit. (Cordelia)—Early-sown grain is looking well; late sown is damaged considerably from continuous rain. Winds have dried land so that farmers and horticulturists will be at work in a day or two. North wind did no damage to speak of. (Batavia)—Weather during the past week has been of great benefit to the crops, as the continual rain the past six weeks had done them a great deal of harm. Things now look favorable for good crops.

SUTTER (Yuba City)—As soon as the ground was in any favorable condition to work at all, the plows were started and will be kept busy for some time. Very little winter sowing has as yet been done this season, and there is still some summer-fallowed land to be sown. The grain will make a rapid growth now if the clear weather continues. (West Butte)—Much of the grain has been injured and killed by the high weather. Summer-fallowed is backward, but with favorable weather may make good crops. Farmers are now busy putting in their winter crops of wheat and barley where the ground is in condition.

TEHAMA (Red Bluff)—Owing to excessive rains no outdoor work has been done during the past month. Planting and seeding are behind, and it is believed that the area of wheat will be one-third less than usual. Floods have done some damage both to orchard and grain lands.

TULARE (Goshen)—Rains have delayed plowing some, but now crops are being planted. Grain that has been sown long enough to be up is looking well and grass is growing finely. The outlook is good. (Tulare)—Prospect for crop of grain of all kinds is a better outlook than it was for many years; also more land seeded to wheat and barley and alfalfa, particularly the latter, than for many years, and still more seeding going on. This winter was warm, no frost to check the growth of vegetation. Grass growing fine till the last few days, when we had light frost; but these frosts are of benefit to the orchard and vineyard, as they check the budding of trees and vines too early, preventing greater loss in the future.

YOLO (Dunnigan)—Summer-fallowed grain is in good condition after the heavy rains. Winter-sown will be apt to crust with the heavy north wind now prevailing. Lands in good shape now and probably large acreage will yet be winter-sown. The low lands east of Dunnigan are rapidly filling up with water—some of it from the Sacramento river, but most of it from the hills and Coast Range mountains. (Winters)—No bad effects are noticeable upon the crops of this vicinity. Grain and pasture are in good condition. Plowing and planting have commenced again. Highest and lowest temperatures, 64° and 32°.

YUBA (Marysville)—Plowing has been resumed in favored localities. Feed on the bottom lands is plentiful and the low stage of the rivers has allowed the lands to drain off the rain-water. What summer-fallowed land was sown before the rains looks well, but the area is small. Great efforts will be made to get grain sown now. Orchard work is a little retarded, but strong efforts are being made to catch up. No damage to oranges and lemons by the frost. (Wheatland)—Early-sown wheat looks strong and healthy. Some low spots where water lodged are drowned out. If present fine weather continues, another two weeks' plowing on creek and bottom lands will begin. Feed growing rapidly.

VENTURA (Santa Paula)—The soil is now thoroughly soaked, and a few weeks of dry weather would be desirable to enable orange and lemon picking to be done, and to allow the farmers to plow and seed their lands. Any considerable rain coming now immediately would mostly go into the ocean, carrying with it a large percentage of rich land. No frost to do any damage yet. (Hueneme)—Weather has been very favorable for growing crops and feed, and neither wind nor frost have done any damage. (Saticoy)—Grasses and grain crops growing nicely; prospects from present standpoint very flattering

for crops. (Freemontville)—The rain came so gently that very little ran to waste. Another feature is the almost entire absence of freezing weather, consequently feed has grown rapidly and is now abundant. Barley seeding is almost over, and bean ground and orchards are being worked. The stand of barley seems to be good. (Ventura)—Bean and corn land, under the effects of this week of fair weather, becoming dry enough to plow, a condition highly pleasing to the farmers, as the weeds were making a rapid growth during the previous weeks of rainy and cloudy weather. No damage from frosts.

## HORTICULTURE.

### Automatic Frost Signal.

TO THE EDITOR:—In your last issue Mr. Brett, of San Jose, asks for an automatic frost signal. So far as I know of, there are several devices for signaling high temperatures but none for low degrees. They mostly consist of thermometers with platinum electrodes, set at a given—say, 200, 300 or more—degree. As soon as the mercury reaches that point there will be contact and a bell set ringing. You cannot use the same device for temperatures near or below the freezing point.

In 1888 I was living in Holland, and had there a hobby consisting of two hothouses seventy-five feet long and fifteen feet wide, heated by a hot-water engine, and raising cucumbers in January for the English market. As the temperature in that country often fell at night as low as 10° Fahr., there was always danger that the temperature in the houses might become too low. So I placed in one house a metallic thermometer, made by a German mechanic after my instructions, and connected the thermometer with the + and the scale with the — electrode of a common electric alarm, placing the indicator at 38° F. The alarm, in the sleeping room of my gardener, rung and he heated up the engine.

In my country inventors are not protected by law for their inventions, and as I was very busy in my laboratory (a laboratory for detecting falsification in food, an institute you need very badly in San Francisco) I dropped the matter; but on reading the question of Mr. Brett, I thought of this thermometer again. This device will answer any purpose, as you can set the indicator at any temperature between 0° and 212°. More, you can use two indicators at the same thermometer, one for low and the other for higher degrees.

I am willing to give full instructions to any mechanic who will make them and get a patent for it. Aptos. G. LOTMAN.

This information will be very welcome to many, no doubt, and will be enough to set our amateur electricians, of whom there are now many, to experimenting. There might also be business in it for a manufacturing electrician, as Mr. Lotman suggests. It would not be practicable to secure a patent on a device which had been for some time in use abroad or in this country, but there might, of course, be patentable features in it as designed by Mr. Lotman.

As we stated before, there have been automatic frost signals constructed and used in this State. We would still like to hear of their style and efficiency.

### A Frost Announcer.

Grangeville Letter in Visalia Delta.

B. Schwartz has purchased two instruments to aid the foreman on the Verona and Felicia vineyards and orchards to save the crops. One instrument is a barometer that will tell the actual and probable changes of weather, thus giving ample time to pile the trays during the raisin season. The other instrument consists of a battery, electric bell and a special thermometer. The bell will be placed near the foreman's bed and the thermometer will be hung on the outside of the building in an exposed place. A small wire running down through the thermometer is attached to one of the wires from the battery and the other wire from the battery is attached to the electric bell. The thermometer is so set that at the least indication of frost it will set the bell to ringing and keep it ringing as long as there is any frost in the atmosphere. The foreman will be able to get into his overalls and get out to the orchard and set the smudges going. Both instruments cost \$30, and if they do their work in good shape it is but a very small outlay for the amount of money they will save the owners.

### A Nurseryman's View of Root Knot.

O. M. Morris, nurseryman of San Bernardino, contributes his views as follows regarding the cause of the common root knot in fruit trees:

"Now, I claim and will attempt to substantiate that this common root knot is caused by irregular growth of the tree, i. e., let a tree grow vigorously for a while, then, by some cause (climatically or by irrigation in some cases), let the tree become partially dormant and then again make rapid growth, and watch your results, and if the soil is conducive to root knot you will find them within two months. In the above condition we find the trees full of sap. This sap becomes set and the 'bark is tight,' and



budding is impossible, then follows this condition. With an irrigation or climatic change the tree starts in a vigorous growth, not natural as in spring; the crude sap from the roots, with its impurities, meets the obstacle of hardened wood and sap and causes an eruption of the tissues and exudes through the pores and an unnatural growth is formed."

### Strawberries in Southern California.

Azusa, in the eastern portion of Los Angeles county and close to the foot hills of the Sierra Madre range, is becoming quiet noted as a strawberry region. At the recent meeting of the Southern California Farmers' Institute at that place there was naturally much attention given to this fruit. The growers seem to have some varieties there which are not widely known outside of their region. Some of them seem to be renamed varieties. This may possibly be true even of the varieties which are said to have been brought from Australia by E. J. Baldwin. The Southern California Pomological Society would do well to appoint a committee to investigate the Azusa nomenclature during the coming fruiting season.

At the Azusa meeting an interesting essay was read by W. G. Hall, of Glendora, as follows:

In writing this paper I confine myself to the strawberry as grown in this valley only. Any difference in their culture in other places may be due to some difference in soil, climate, etc.

The strawberry was first introduced into this valley some twenty years ago, since which time the industry has gradually increased. They were not, however, grown for market until about the year 1880, when a very few were sold. A few years later they were quite plentiful for the market, which was limited, as there was no access to any market that could not be reached by team and wagon. As soon as berries were worth but six cents per box, the berry-men here thought it not profitable enough to continue picking.

Since this time there have been built through our midst two transcontinental railroads, which give us rapid and easy means of transportation, not only to our home market, but to-day are carrying our delicious berries, plump and fresh, to all the leading markets of the United States, making the dinner and banquet delightful to its guests in these their winter months.

There may be other places that raise as fine berries as we, but there are none that can show them as many days in the year. Hence, one great aim of the berry grower of this valley is to combine an attractive deep colored berry with that of a solid and long keeper.

**Varieties.**—There are some six or eight varieties growing in this valley. The one most commonly grown I have heard by three different names: the Australian Monarch, the Australian Crimson and the Monarch of the West. I think the former is the most common. It is very prolific and comes nearer being an all-through-the-year bearer than any other that has been thoroughly tested. For shipping it cannot be surpassed, but it is a very unevenly colored berry, some of them being quite white when ripe, and when placed in our far eastern markets, they are rejected because the consumers think that they are green.

The Jessie is being extensively cultivated for our immediate home market. While it has one advantage over the Australian Monarch, namely, its appearance, it is not so good as many others.

The Lady Rush is a very fine berry, being a very deep crimson red, and is very prolific, but owing to its imperfect blossom, it must be planted alternately with other varieties that its bloom may be fertilized.

The Wilson is thought by some to be a good berry, but there is little probability that its cultivation will be again resumed. It was one of the first varieties introduced into the valley.

The Arizona Wonder Everbearing is a large, smooth, glossy berry, very evenly colored, being a very pale red. It is said to be ahead of all others as an all-through-the-year bearer. If this proves true, it is destined to be a favorite for our home market. I think it is the prettiest berry I have ever seen. It has fine flavor and is very prolific.

**Planting and Culture.**—The strawberry should be planted some time between the months of April and March. If set in the earlier months, care must be taken first that you have strong and vigorous roots; and second, that you use plenty of water, the more the better, unless it hardens the ground. The water supply must be kept up until the roots have taken a good hold in the soil. If set in September and October and properly cared for, one can safely count upon one-half a crop the first season. If set as late as March it is not very probable that you will pick more than eight or ten crates per acre the first year.

Thorough cultivation must not be set aside for any theory that it injures the plant. Moderately deep and frequent plowing between the rows and not within six inches of plant, with frequent hoeing through the rows that will keep the dirt loose and

pulverized for from a half-inch to an inch in depth, will not only hold the much needed moisture, but will keep the plant in a vigorous and healthy condition. The plants should be set fourteen or fifteen inches apart in the row and should not be allowed to spread from the main hill. The rows may vary from two to four feet apart, but it is not practicable to have them over three feet, and I believe that two feet three inches or two feet six inches will prove the best distance for practical berry growing. I have planted several thousand in rows two feet three inches apart with which I am well pleased so far. The object I am laboring for is to economically irrigate with but one furrow. To let the water flow in the center between the rows and let the moisture pass out through the side to the plant is much the best for the plant.

**Constant Care.**—The strawberry is such a delicate plant that it must be looked after for three hundred and sixty-five days in the year. A neglect of one month or sometimes of but two weeks will result in serious injury to the next season's crop and a very little more may lose the plant entirely.

Do not let your runners grow during the summer. It will seldom pay you even if you could sell every plant at a nominal price. It is far more exhaustive to the old plant to have its runners grow and take root beside it than an entire crop of fruit being picked as fast as it ripens. Keep the plant to its original single hill for three or four years, then renew and reset with strong and vigorous plants.

There are few fruits on which fertilizing pays as well as on the strawberry. While the plant is not exhaustive to the soil, yet it needs the richest soil to make it do its best. Some have been experimenting with apparent success with nitrate of soda, which acts as a powerful stimulant. While it may be well to use it on the last year of the vines, I do not think it practical to use it at any other time. It would be much better to use some good fertilizer that will feed and nourish the plant. Stable dressing is one of the best when thoroughly rotted.

**Yield.**—The average berry fields, when properly cared for, yield from 8,000 to 12,000 pounds per acre in one year, of which the greater part is taken from the vines during the months of May and June, which time the market is fairly good considering the amount put out. Later on as the weather gets warmer, the quality of the berry deteriorates, and owing to the abundance of other fruits, the demand decreases. By the first of November when other fruits become scarce, then the strawberry is again depended on to supply the natural appetite for fruit.

At this time of the year (December) the berry is not a regular bearer, though it has been demonstrated that under proper conditions it will bear very well. About the first of this month I counted on one of my Lady Rush vines ninety-two berries from bloom to ripeness, also fifteen buds which had not yet blossomed, making 107 berries in sight on one vine.

While we are striving to obtain a choicer variety and the most economical way of raising and handling, let us not forget one of the most important of all questions to the berry-grower of the Azusa valley—that is, how to make the berry bear prolifically at a given season of the year.

### Laying Off an Orchard.

G. W. Mosteller, of the Star Nursery, Ventura, gives the *Advocate* of that town the following timely paragraph: As a plan for staking off an orchard by the equilateral-triangle method, the following is perhaps the most expeditious plan, but will not do for hilly or stump land: Determine the length and width of plat to be staked off; get two No. 12 galvanized-steel wires of corresponding length and width of orchard. One of the wires is to be used to establish base line, and to establish each row of stakes across the orchard. Let us call this the base-line wire. You will need marks on this wire exactly the width the trees are to stand apart. Waxed string wrapped round and round at each distance will do, but it is better to use a bit of cloth at these marks, made secure, so as not to slip, by wrapping waxed string over and under it, yet so as to be plainly visible. Now, as you wish to plant in equilateral-triangle form, place string and bits of cloth of another color half way between the marks noted above. Stake this base-line row at each alternate mark. The other wire is needed to stake the two sides the distance the rows, not the trees, are to be apart. This is determined by multiplying the distance apart the trees are to stand by .866. To illustrate: Suppose the planter wishes to plant at thirty feet apart each way; multiply .866 by thirty feet, which equals 25.98 feet, almost twenty-six feet from row to row. The stakes in this case at the sides of plat will be 26.98 feet apart and must correspond with marks on the second wire. To get other distances apply the same rule. But you cannot establish these side stakes until you square the plat of land to be planted. To do this, saw three straight strips of board—one six feet, another eight feet, and another ten feet long. Nail the two short strips at right angles and join them across the angle with the ten-foot strip. Place this right-angle frame with one base on base line at the corner of the plat, and the other base of triangle

enable you to establish the square. Use the second wire to aid you. Now set the stakes to correspond with marks on the wire. Take this wire to the opposite side of plat and do as before. You are now ready to stake off the plat. Return to the base-line wire. Have a man at each end to move and stretch the wire into line with next stake on sides. Make tight and secure the wire, then stake this row at the alternate marks from the base row. Be sure to carry the wire straight at one end continually, allowing the other man to give or take slack. Continue this until the entire block is staked. You might divide a large orchard into forty or fifty-acre blocks. If the orchard be small, you can get along without the use of the side wire, by measuring carefully with a short wire. To determine the number of trees per acre when set "diamond" form, first get the number required as if set square form, and divide it by .866. To find number square form, square the distance between the trees and divide 43,560 by it.

## FLORIST AND GARDENER.

### Cleaning Garden Seeds.

TO THE EDITOR:—In answer to "Subscriber," and in accordance with your invitation in the *RURAL* of December 29th, I will write a short article and try to make it plain as to how I clean garden seeds of various kinds on a small scale.

I have never raised a large amount of any kind to sell, with the exception of the "Winter Pineapple muskmelon," but have learned what I know about the clearing of seeds by practical experience.

**Melon, Tomato and Cucumber Seeds.**—I put those through a fermenting process, as follows: I use a barrel, tub, coal-oil can, or some smaller vessel, according to the amount of seed to be cleaned.

In cleaning my melon seed some years ago, I used three large whisky barrels, and was not very long in securing fifteen hundred pounds of the plumpest and nicest seeds I ever saw, and so said the Eastern seedsmen. I gathered the melons in the heat of the day when the pulp and seeds were very warm. By so doing, after being put into barrels, fermentation would commence at once. I made a box ten feet long, eight inches wide and four inches deep. This box would hold from twelve to sixteen melons. I cut them in halves with a spade, and scraped out the pulp and seeds with a small wooden spoon-shaped scoop. I then filled my barrels about two-thirds full and covered them with barley sacks. I generally let it remain about forty-eight hours, more or less, according to the temperature, or until the pulp was reduced to a thin, sour, watery mass. This pulp would foam and raise like yeast, and for this reason I found it would not do to fill the barrels more than two-thirds full or many of the seeds would run over and waste.

I found it a good plan to stir the mass occasionally, as it seemed to hasten the decomposition of the pulp, as well as to keep it from running over.

Before straining the seeds, which I never did until perfectly free from film, I always saved about fifteen gallons of this sour yeast (I called it) in order to put into the next lot of seed to hasten fermentation.

I found it very necessary to keep the contents of the barrels warm day and night, in order to not have the seeds too long in the fermenting process, as it would soon spoil their vitality. In order to do this (later in the season) when the nights were cool, I put my barrels on a heap of fresh horse manure and straw, some three feet in depth, and piled it up nearly to the top of them.

For a strainer I used a screen made of thin galvanized sheet iron, which was three feet square, with holes nearly one-fourth of an inch in diameter. The sides and ends of the box were eight inches wide.

I would then pour ten gallons or more of the pulp and seeds into this screen and have a boy pour on water with a coarse sprinkler, and with a stiff house broom I could quickly clean the seeds in one barrel.

I then spread them on my prune frames fully exposed to the sun, and stirred them occasionally with a steel rake. They would dry sufficiently in one day to put aside in the shade for a few days before being sacked for shipment.

For separating cucumber and tomato seeds from the pulp on a small scale I make a small shallow frame and nail on common wire fly netting, dip the box a little into water, shake a few times, and the seeds are soon perfectly cleaned. Dry them the same as melon seeds.

**Radish and Beet Seed.**—I gather and clean in the following manner: I cut off just enough of the tops to secure all the seeds that are fully matured. I find it necessary to gather the beet seed several times, as they ripen so unevenly. I then spread them three or four feet in depth on "prune cloths" or wagon sheets, which are spread on level ground that has been well raked and the surface made as smooth as possible. I let them remain until the largest stems are perfectly dry, when I give them a most thorough thrashing with an old-fashioned flail, turning them several times during the operation. With a common hay rake I rake off all the stems and chaff possible, and finish with a steel rake. I sift



the seed through home-made sieves with holes from one-half of an inch to a little less than one-fourth of an inch in diameter. These sieves I make of light sheet iron, nailed on to light shallow frames of different sizes. I find them very convenient, not only for sifting seeds, but for flower dirt, separating burnt bones and charcoal from ashes, etc.

I finish cleaning them by winnowing, using a common milk pan for the purpose. I find it extremely difficult to thoroughly clean the beet seed in this manner, as many of the short, thick stems are so near the weight of the seeds that it is almost impossible to do good work.

I am satisfied if I had a "fan mill" such as the farmers used here years ago in cleaning their grain, beans, etc., I could clean them nicely with very little trouble. On inquiring I could not hear of such a mill in this vicinity, and therefore was compelled to clean them as before stated. IRA W. ADAMS.

Bay State Garden, Calistoga, Cal., Jan. 25, '95.

### Lawn Making on Leachy Soils.

It must be pretty hard work to get a lawn on leachy soil in Arizona where they have to screen out the coarse particles from all the soil to be laid down in grass, but their method may interest some who have such coarse debris to work upon in this State. The following is from the pen of Mr. Mark Walker, assistant horticulturist of the Agricultural Experiment Station at Tucson: "It should be known at the outset that we are in possession of a peculiar soil on the grounds of the station and university; it is the ordinary mesa soil of the district, generally about fifteen to eighteen inches deep and charged with caliche, giving a soil the least retentive of moisture; this is also made worse by a uniform understratum of caliche, which varies in depth from three to five feet. To overcome the excessive porosity of the soil, we find it necessary to trench and screen for all border and lawn work—for the latter to a depth of twelve to eighteen inches. After this we harrow in some well-rotted manure, roll down firm and level, then sow preferably blue grass, at the rate of three bushels to the acre, rake in very lightly, mulch with about two inches of coarse stable manure, then water thoroughly and repeat the watering as the top soil becomes dry. If sown in the spring, the seed should germinate in from four to six weeks, and success will be determined by the treatment given in these weeks. When portions of the lawn fail to germinate, we find it best to wait till the rest comes up three or four inches, and then transplant what is needed to fill out the ground, in turfs of two or three inches in diameter, giving a mulch of good top dressing around each turf; this method is preferable to resowing the blank spots. When symptoms of exhaustion appear we mulch quite heavily, as we find the excessive sprinkling necessary to keep the lawns up in good color entails rapid exhaustion of the soil. Rolling and frequent mowing are essential to the acquisition of a really beautiful lawn. The quality of the blue grass seed should be carefully ascertained, as it is the most generally defective of all grass seeds, and is sometimes utterly worthless, besides being mixed with seeds of pernicious weeds."

## THE POULTRY YARD.

### Pullets' Eggs for Hatching.

The experience of C. Nisson, of Petaluma, runs strongly against the old tradition that pullets' eggs are not desirable for hatching. He describes his experience in the *Cultivator and Poultry Keeper*, as follows: Some two years ago a poultry man living twenty and some odd miles from my place, and who has to come to my place when in need of eggs, had notified me through the mail that I might expect him on a certain day for eggs to fill his incubator. I don't just now remember whether his letter, or mine, advising him that there would be no eggs at that time, had been delayed, but I know he did come, and I had no eggs for hatching for him. All the eggs I had were a lot of culled ones, mostly pullets'—nearly all so. There was quite a lot of them. I told him they would hatch well enough. I knew that much, but in regard to raising the chicks I had my doubts, as everybody advised against using pullets' eggs for hatching, but if he wanted to try he might have them at market price. He took them, remarking that he did not share the popular prejudice against pullets' eggs. Well, the result was not only a good batch (in a home-made incubator, with no regulator), but also a splendid success as far as raising them went. He not only had all the pullets he wanted for his own use, but had quite a number for sale.

Last summer quite a number of my early raised pullets found their way back from the colony, where they had been placed, to the home buildings. Being rather short of help, no time was found to catch them and bring them back, and they were allowed to remain and shift for themselves. It is well known that Leghorns are fond of hiding their nests away in secluded spots, hard to find; and it is also well

known that it is about the only way in which they will sit and bring out their brood. So it happened that during the fall months quite a number of these pullets, some of them scarcely full grown, presented themselves at the house with broods varying from five to fourteen each. Well, they were cared for in the usual manner by some one of the family, and all did well. Old hens with chicks from hens' eggs could not have done better, and I know some of the eggs that were hatched were not larger than a pigeon's in size.

Again, when setting my incubator for the first time last season (the fore part of November) it happened that a number of my customers also started theirs at about the same time, and it occurred that I had not a sufficient quantity of hen's eggs: I either had to put off the setting or use the culls, and so the incubator was more than half filled with pullets' eggs. The incubator was not quite full—about 1900—of which about 1000 were pullets' eggs. I had an unusually good test and hatch—some 1400 fine chicks and some fifty belated ones. This did not surprise me, as the eggs, owing to the abundance of green feed and the unusually fine weather, were in prime condition.

These chicks are, at this writing, thirty days old, and as fine a lot as one could wish for. Very few have died, and they are of remarkably uniform size; in fact, there was more difference in their size, proportionately, when they were hatched than there is now. Whatever their future may be, it will not have anything to do with the fact that they are the offspring of pullets, unless in one respect, that they will make better layers. But that, of course, is only a hypothesis.

### Soft-Shelled Eggs.

Hens sometimes lay soft-shelled eggs. The cause generally, says C. T. Abbott, of Coronado, in the *Los Angeles Cultivator*, is a scarcity of shell-forming material. This can easily be remedied by an increased supply of shell-forming material, such as lime, bones, etc. Occasionally, however, it arises from the fact that the hen is laying so rapidly that she has not time or strength to shell her eggs. In such a case catch her and shut her up by herself for a few days, check her laying and give her a rest, during which her ovary will regain its strength. It is better to lose a few eggs than to lose the hen that lays them.

These soft eggs are hard to pass, and in straining the hen is very apt to break them in the egg passage or oviduct, and death generally follows such a mishap.

Sometimes hens that have laid a large number of eggs during the season, will, towards the end, lay soft eggs; if so, it is because the ovary is weakened and cannot retain the eggs, but drops them into the egg passage too quickly on each other, so that they have no time to shell during their passage through the oviduct—it is in this passage that the eggs are shelled. The hen should be given a tonic and some bone dust, and she will soon be all right if checked laying for a few days.

I believe that all stimulating-food is bad for hens, if given too much. I am sure, from my own personal experience, that red pepper, if given for long, makes the ovary diseased, and also gives chickens liver complaints.

Overuse of all stimulants will in time result in disease of the egg organs, and will be the cause of many shell-less eggs. Hens fed on stimulating food will lay more eggs for a time, but they soon become exhausted and diseased, and eggs laid by hens forced to lay by too much stimulating food are never strong, and frequently produce weakly chicks.

There is one perception which a horse possesses to which little attention has been paid, says Tait, and that is the power of scent. With some horses it is acute, as with the dog; and for the benefit of those who drive at night, such as physicians and others, this knowledge is invaluable. I never knew it to fail, and I have ridden hundreds of miles of dark nights, and in consideration of this power of scent this is my simple advice: Never check your horse at night, but give him a free head, and you may rest assured that he will never get off the road and will carry you safely and expeditiously. In regard to the power of scent in a horse, I once knew one of a pair that was stolen and recovered mainly by the track being made out by his mate, and that after being absent six or eight hours.

PORK PACKING at Chicago continues on a liberal scale. Up to last week the total since the opening of the winter packing season was about 1,800,000 head. By March 1st it is expected the total will be close to 2,400,000. This will be an increase of some 600,000 head over the season of '93-94.

In the State inspection of actinomycotic or "lumpy jaw" cattle at the Union Stock Yards at Chicago there have been inspected 2,313 head of suspected cattle by the assistant State veterinarian, of which 1,460 were passed in the yards, and 853 slaughtered, and 622 condemned as unfit for food.

## THE STOCK YARD.

### Further Notes on Live-Stock Values.

TO THE EDITOR:—After sending you my notes on live-stock values in 1894 (now one month ago), I received the *Breeders' Gazette* of December 26th, which contains two interesting letters on the same subject, relating to prices made in Great Britain for all kinds of farm stock during the past year.

The first is from Messrs. John Thornton & Co., of London, taking a general view of the live-stock trade in Great Britain for the past year which, they say, has shown a generally decided improvement on the records of the previous season; also, that there is a marked improvement in the cattle of the country. "The fashion—stimulated by the demands of your countrymen for particular lines of pedigree only—has declined, and herds are more robust in constitution and improved in their milking qualities."

The above italics are mine. Those of your readers who take an interest in live-stock matters will be informed as to the view I have always taken in regard to the subject of breeding for pedigree, regardless of individual merit in the animal. Then, too, the "color line," so strictly adhered to by the majority of "your countrymen," has much to answer for in the production of animals of inferior quality, not much less, perhaps, than the line-breeding for pedigree—or breeding cattle on paper, for that is all it amounted to. The principle, carried to excess, was never productive of good results. Yet there are several instances on record in which, practiced with moderation and guided by mature and experienced judgment, the results have been very satisfactory in producing some of the best of cows and most prepotent of bulls. But it is only "the few" who may venture on these lines in animal breeding; therefore, let the truly fashionable breeding be in aiming to breed good animals, which does not necessarily mean show animals, but, rather, such as are useful on the farm, giving lots of milk and, in the end, beef.

To quote again: "One breeder sold three bulls privately at the Royal Show this year for considerably over £1000 (\$5000, which must mean an average of at least \$1700 apiece, though it is not stated how much over the \$5000 was obtained for them). The average at sales this year is \$5 per head over last year, and many more animals have been sold. We have exported them to North and South America, Australia, Africa, Germany and France. Where a really good animal is found, combined with fashionable breeding, he is still very much in request, showing that there is still good value left in the old strains of blood."

Does this mean that "good animals combined with fashionable breeding" are not over plentiful? For my part, I understand it that way. High prices are caused by one or both of two things, scarcity and quality; therefore if good animals so bred are scarce they will naturally be in demand. Fortunately for the general farmer or stockman, as good animals, and more of them, can be had by good breeding as are produced by "fashionable breeding."

As for Scotland, the canny Scot still holds sway. A Polled Angus bull that sold for about \$1500 was at the top, so far as is publicly known, in regard to prices. He even beat the famous Scotch Shorthorns in their "ain countrie." The same black breed was also on top at the English fat-stock shows. At both Birmingham and Smithfield the same Polled Aberdeen-Angus heifer was champion beast over all breeds, a Shorthorn steer holding the reserve ticket. The heifer was sold for \$785, after having won prizes and cups to the value of about \$3000. The steer was sold for \$575. Both animals were sold for slaughter, and were under three years of age.

### HORSE SALES.

In the same letter is a brief reference made to the good prices made by horses of the Hackney breed, of which there were two mares, daughters of the celebrated horse Danegelt, that sold for upward of \$5000 and \$6000 respectively. The sensational horse sale of the year, however, was probably the one briefly referred to by the *Mark Lane Express*, as follows:

"At Newmarket on Saturday, Messrs. Tattersall sold a team of twenty animals from the late Dowager Duchess of Montrose's stud. They fetched the enormous sum of 27,655 gs., or an average of 1382 gs."

The above is an average of \$7250 in U. S. gold coin, at \$5 to the pound sterling of twenty English shillings, the guinea being an antiquated coin of the value of twenty-one shillings, and, seeing that it has ceased to be a coin any longer in circulation, it is puzzling to know why it should be quoted in giving prices of pedigree stock (only) that is sold at auction.

The other letter referred to is from Mr. Alfred Mansell of Shrewsbury on "The Outlook for Shropshires," which I will reserve for my next writing.

ROBERT ASHBURNER.

Baden, San Mateo Co., Cal.

THE standard quotations in the New York City horse market last week were: Well matched coach pairs, \$735 to \$875; clever drivers, \$225 to \$650; fast roadsters, \$200 to \$800; business horses, including those suitable for doctor's gigs, etc., \$125 upward, railroad and contractors' horses, \$100 upward.



## THE HOME CIRCLE.

## "Rock of Ages."

"Rock of Ages, cleft for me,"  
Thoughtlessly the maiden sung,  
Fell the words unconsciously  
From her girlish, gleeful tongue;  
Sang as little children sing,  
Sang as did the birds of June,  
Fell the words like light leaves down  
On the current of the tune—  
"Rock of Ages, cleft for me,  
Let me hide myself in Thee."  
"Let me hide myself in Thee,"  
Felt her soul no need to hide;  
Sweet the song as song could be  
And she had no thought beside;  
All the words unheedingly  
Fell from lips untouched by care,  
Dreaming not they each might be  
On some other lips a prayer—  
"Rock of Ages, cleft for me,  
Let me hide myself in Thee."  
"Rock of Ages, cleft for me"  
'Twas a woman sung them now,  
Pleadingly and prayerfully;  
Every word her heart did know,  
Rose the song as storm-tossed bird  
Beats with weary wings the air,  
Every note with sorrow stirred,  
Every syllable a prayer—  
"Rock of Ages, cleft for me,  
Let me hide myself in Thee."  
"Rock of Ages, cleft for me"  
Lips grown aged sung the hymn  
Trustingly and tenderly—  
Voice grown weak and eyes grown dim,  
"Let me hide myself in Thee."  
Trembling though the voice and low,  
Ran the sweet strain peacefully,  
Like a river in its flow,  
Sung as only they can sing  
Who life's thorny paths have pressed;  
Sung as only they can sing  
Who behold the promised rest—  
"Rock of Ages, cleft for me,  
Let me hide myself in Thee."  
"Rock of Ages, cleft for me,"  
Sung above the coffin-lid;  
Underneath, all restfully,  
All life's joys and sorrows hid.  
Nevermore, O storm-tossed soul,  
Nevermore from wind or tide,  
Nevermore from billow's roll,  
Wilt thou need thyself to hide.  
Could the sightless, sunken eyes  
Closed beneath the soft gray hair,  
Could the mute and stiffened lips,  
Move again in pleading prayer,  
Still, aye, still, the words would be,  
"Let me hide myself in Thee."

## Is Life Worth Living?

Professor Norman Brokaw stood at his window, looking out at the dying day. The western sky was all aglow with a warlike crimson, that, away above his head, softened into a rosy pink. But the professor was not thinking of the sunset. His finely molded features wore an expression of weariness and his intellectual blue eyes looked out from under his luxuriant brown curls with a settled melancholy.

He was young—in fact, just twenty-six—but his dress gave him the look of a much older man. His coat did not fit him and his whole attire was careless and old-fashioned.

Behind him stood his desk, from which he had just risen, covered with papers, pencils and ponderous volumes in many languages. In his hand he still held the last sheets of a thesis he had been writing when the sunlight had deserted him. It was entitled, "Is Life Worth Living?" and was designed for a popular magazine that had requested something from his pen. In it he had proved conclusively, quoting freely from classic and German authors, that this life of ours, taken all in all, is decidedly not worth the living.

He felt quite satisfied with his effort. His arguments seemed to him soundly drawn and unanswerable. He read the last sentence over twice with evident approval: "And love, the fairest bubble mortals chase, the soonest bursts and turns to nothing but a vain deceit."

He flattered himself that that was rather well put, and he jotted down some ideas in continuance of the thought, which he would elaborate that evening. Then he hastily donned his overcoat, and, as it looked like rain, grasped an umbrella unfashionably large and went out to his dinner, which he took at a cafe near.

He ate his dinner in solitary silence, unheeding the laughter and jests of irrepressible students at tables all about him. They observed him with a respectful stare, for they knew that

this young professor was already famous in the intellectual world, and they felt a personal pride in the honorary degrees that other people wrote after his name although he never did.

They knew that his pamphlet on "Phenomenality of Spirit" had been translated into fourteen different languages, and had revolutionized modern thought on that subject.

The professor sat idly drumming with his fingers on the table, waiting for his dessert. He felt a half pitty, half contempt, for people who could laugh foolishly in such an empty world. Strange sentiment for a young man! But Norman Brokaw's life had been a strange one. Early deprived of father and mother, he had been brought up by an uncle, a man divorced from his wife.

Proud of Norman's bright intellect, his uncle had lavished money on his education, but the love and cherishing that are the inherent rights of childhood the boy had never known. After graduating and taking a master's degree at Harvard he had gone abroad and spent two years at a German university. His life had been destitute of social pleasures. He had scarcely known a woman, save the old house-keeper.

His uncle, embittered by his own sad experience, had warned him against the whole sex as foes to man's happiness.

On his return to America he had been tendered a professorship in the large university where he now was. His uncle's death while he was abroad had left him an independent fortune, and now, at twenty-six, rich, famous and in perfect health, he found life only an immense, an unnecessary affliction.

He finished his dinner and strode out again into the chill November night, his fine figure and firm tread followed with admiring eyes by would-be aspirants for college athletic honors. His abused muscles pleaded for exercise to-night, and he struck out into a brisk walk down one of the quiet streets. Clouds had been gathering while he was at dinner, and soon big raindrops began to fall. He hurriedly opened his wide-spreading umbrella. Just then an exclamation of dismay fell on his ears.

He turned an aw, crossing the street in the full glare of the electric light, a young lady in the prettiest of fall costumes. She had no umbrella and the rain was beating ruthlessly down on her large velvet hat with its masses of waving plumes. As she caught sight of the professor her face brightened, and with an impulsive bound she stood beside him under the umbrella.

She raised appealingly a face so captivating in its girlish freshness that even the professor's grave features, shaded by the umbrella, softened into a smile. Long lashes veiled a pair of the loveliest hazel eyes that ever lighted up a veritable rosebud face. Perhaps the features were not quite regular—the nose had a little independent style of its own, but the lips were very red, and the little auburn curls just showing under the white hat brim completed a *tout ensemble* that was bewitching.

The professor suddenly recollected himself and stammered:

"Certainly—of course—I shall be very glad."

"Thanks awfully; you're so kind," replied the young lady, walking along beside him. "I did hate to ruin my new dress and hat. I just got them from home yesterday. I'm a university student," she explained, "but I live in New York. I suppose anybody else would have got completely drenched before they'd have asked to share your umbrella without being introduced, but I thought you wouldn't mind. You're sure you don't?"

"Quite sure," said the professor, laughing. This was rather amusing. Lifting the umbrella a little more over her, he asked, with fatherly patronage: "May I ask what work you are pursuing at the university?"

"I? Oh, I pursue Greek and English and history and French, etc. I'm going to take philosophy next term."

"Under whom?" queried the professor, with interest.

"Under Professor Brokaw. He's awfully clever; but they say he's just as cranky as he can be."

"Indeed!" was all the astounded professor could ejaculate.

"Yes; gets himself up like a scarecrow. It's a pity, too, for he'd be real handsome if he only knew it. I watched him in chapel yesterday. He has beautiful eyes, so large and dreamy, and the loveliest hair! But he always looks as if he'd lost his last friend. Perhaps you know him?"

"Slightly," replied the professor, for the first time in his honorable career stooping to dissimulation.

"They say he hates women," she continued. "He's never had any in his classes, but some of us are going to beard the lion next term. Well, here we are at my house. I'm so much obliged to you. Good night."

And before the professor could regain his senses, she had slipped from under his umbrella and was gone.

Divided between indignation and amusement, the young professor strode home. So that was what people said of him—he was a crank and he hated women. It was a new experience having such things said to him, and he didn't like it. But "his eyes were lovely," were they? He had actually blushed in the darkness when she said that, and he found it soothing now to his wounded vanity.

Would it be believed that the first thing the learned professor did on reaching his rooms was to walk straight to the mirror over the grate and study himself with all the interest of a freshman? For the first time he noted that his coat was shabby, and a firm resolve shone in his eyes. His hair wasn't bad, perhaps, and his eyes,—again the swift color came into his face and with a boyish laugh he turned away from the mirror.

His thesis lay on his desk.

"I don't feel like that any more to-night," he said, and he thrust it into a small drawer and threw himself into an easy chair to read.

Professor Brokaw had just begun his lecture on the first day of the next term when the door opened and in walked six very demure young ladies, headed by his acquaintance of the rain-storm. They seated themselves separately near the door, unheeding the chairs placed at their disposal by as many gallant young men. Forewarned is forearmed. The professor merely included them in a general bow of recognition and proceeded with his discourse.

At the close of the hour the students came forward for enrollment. As the professor took the card from the fair sharer of his umbrella he looked her bravely in the face, wondering if she would recognize him, but she only blushed slightly and dropped her eyes.

"Grace—what is the last name?" he asked serawling her name in his book.

"Hamilton," she said, and he thought that a pretty name for such a cruel young woman.

The professor had apprehended dire and dreadful things from that class in philosophy, but he was, happily, not doomed to experience them. He was a gentleman and he treated the young ladies courteously. That being all they wanted, they smiled upon him amiably in return, and said he was "quite nice." There were nevertheless, not wanting revelations for him. He at first charitably refrained from "quizzing" the young ladies, under the impression that their minds were unadapted to grapple with the abstractions of philosophy. What was his amazement to discover on the first examination that one of the two candidates for higher marks was a young woman, and that one Grace Hamilton.

He was none the less gratified, and the next time he met her he stopped and told her how pleased he was with her work. And he was glad that he done so when he saw the pretty flush of pleasure it brought to her face.

So interested did the professor become in this bright pupil of his that he would frequently bring her books from his private library to shed light on

dark problems, and he was surprised to find how quickly an hour or two would slip away while he was explaining things to her.

During those winter months the young professor was passing through some strange phases of life. He was beginning to discover that with all his knowledge some things he had yet to learn.

Not Kant nor Schopenhauer had ever told him what a charming thing a sweet young woman can be, nor had all his mathematics taught him to estimate the face value of a smile. He seemed to be entering into a new world in these latter days. He wondered that he had never noticed before how bright the sun shone and how blue the sky was.

With all this revolution taking place under the professor's brown curls, there had come about a complete metamorphosis in his external appearance. He no longer wore shabby clothes, but walked the streets in the most stylish suits that a city tailor could devise.

He had never, with all his erudition, taken a course in the science of love, and it was long before he could interpret to himself these new sensations of his. When at length it dawned upon him that he was actually in love with Grace Hamilton he was appalled at his audacity.

He looked at her in class with a guilty feeling that he ought to fall on his knees and beg her pardon for having dared to love her.

But, logically concluding that some man would eventually presume to such boldness and he might as well be that man, he began to watch if he could detect any indication on her part that she ever gave a thought of him other than as her professor.

One day a smile or word would lead him to think she did, and he would be in the seventh heaven of hope and joy. The next he would be plunged into the depths of rayless despair and madly jealous of some handsome youth who sat next her in class and passed her chocolate creams.

All this time the weeks were slipping by one by one, and at last there came a bright day in June when the professor realized that commencement was only two days away. He wandered about aimlessly all day trying to face the misery of not seeing Grace Hamilton all summer. By evening he could endure it no longer. He yielded to the promptings of his heart and turned into the street that led to her house.

He found her alone in the vine-covered side veranda, looking like a picture in a dainty white dress, with a blue fringed scarf thrown over her shoulders.

"I know I am selfish to take up your time in these last days, Miss Hamilton," began the professor, apologetically, "You have so many other friends who have a better claim on you."

"Oh, no, indeed," declared the young lady. "I think dragging me safely through the profundities of philosophy all winter ought to constitute a claim, if anything could. We girls were saying to-day we thought you'd been wonderfully good to us."

"You didn't find me as bad as you expected, did you?" said the professor.

"Why, we didn't expect—" she

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began, and then she stopped in confusion.

"Oh, yes, pardon me, but you did expect to encounter something terrible when you ventured into Professor Brokaw's class. I had it from your own lips."

"From mine!"

"Yes. Let me tell you something. Do you remember being caught in a rainstorm one night last fall and walk-home under a stranger's umbrella? You will recall that you said some very plain and uncomfortable thing about Professor Brokaw. Well, do you know who that stranger was?"

Grace Hamilton's face had grown scarlet while he was speaking.

"Oh, Professor Brokaw!" she stammered, penitently. "I was in hopes you'd never know! I knew you when I heard you speak in class, but I thought you didn't know me. It was so dark that night. I've always felt so sorry about it."

"You said I was cranky, and that I hated women," he continued teasingly.

"Please don't!" she begged. "I didn't know you, or I couldn't have said such things. I take them all back."

"But you said I had beautiful eyes. Do you take that back, too?"

She looked up and met something in the beautiful eyes that made her drop her own and blush. The professor blushed a little, too. Then they both laughed.

"No, I won't take that back," she said. "They are beautiful."

Something in the downcast, blushing face inspired the professor with a sudden boldness.

"Grace," he said, impulsively, "I know it's a great deal to ask, but do you think you could ever come to care enough for your stupid professor to make his whole life glad for him? Could you ever think of being my wife, Gracie?"

The long lashes quivered, as they drooped over the hazel eyes, and the little fluttering leaves of the woodbine and the trumpet creeper near stood still, waiting, with the professor's heart, for the answer, that came in a low, tremulous voice:

"I might if—you asked me."

Two hours later Professor Brokaw came dashing up the stairs to his rooms, two steps at a time, humming a lively tune. He turned up the gas, and began hastily to finish packing the contents of his desk, for he was to leave day after to-morrow. The grate was already filled high with waste papers, to which he added others, and touched a match to them.

Opening one drawer he came across a partly finished manuscript. Looking at the first page he saw that it was that old thesis he had written on "Is Life Worth Living?" and he sat down on the table and read it through.

He finished and sat looking out into the moonlight or a moment, with a dreamy look in his eyes.

"What a fool I was!" he said, at last, with a happy laugh, and he tossed the thesis into the grate.

### Gossip as a Moral Force.

How is it about gossip? Is there a justification for it? Does it serve any purpose useful enough to warrant its existence? Does a person who refuses to take part in it show himself superior to his fellows, or does he shirk an obligation that he owes to society? When Jack Hairbrain's attentions to young Mrs. McFliget become audaciously conspicuous, and the whole community sits around and discusses them, is the community engaged in a valuable work that demands to be done; or is it merely giving evidence of its malicious dispositions and the emptiness of its mind? If we should see Jake Hardman running away with Charles McFliget's pocket-book, we should think ill of ourselves if we did not cry "Stop Thief," and join in the chase after the rascal. But suppose we think we see Jack Hairbrain in the act of robbing McFliget of the affections of his wife. Are we really entitled to think better of ourselves for holding our tongues and overlooking this apparent larceny, than if we expressed our sentiments freely one to another? If there is enough talk, Flora McFliget's ears will be close-stopped indeed if some of it does not find its way into them. Is it a kindness to her or Jack to let their behavior pass unnoticed? When there is a bridge down on the railroad and a train is coming, it may be disconcerting to the engineer to halloo and wave a red flag at him, but after all it is kinder to jar his nerves a little while there is still time to pull up, than out of an extreme politeness to let him go to destruction. If Jack Hairbrain and Mrs. McFliget actually elope, the newspapers will attend to their case down to its remotest details; but so long as their dispositions are susceptible of cure, a worse thing may happen than for the gossip's court to take note of their case and try to laugh them back to good behavior.

### Gems.

In this world, it is not what we take up, but what we give up, that makes us rich.—Beecher.

Science is made for few men. Duty is the mistress of all men; they cannot be men without it.—Gladstone.

Zeal without judgement is like fire beyond control. It consumes that which is good as well as that which is evil.

When one has come to seek the honor that comes from God only, he will take the withholding of the honor that comes from men very quietly.—Macdonald.

There is no burden which, if we lift it cheerfully, and bear it with love in our heart, will not become a blessing to us. God means our tasks to be our helpers heavenward. To shrink from a duty, or to refuse to bend our shoulders to receive a load, is to decline a new opportunity for growth.—J. R. Miller, D. D.

### When the Skies Clear Off.

The prospects will be brighter,  
The burdens will be lighter,  
An' the souls of us be whiter  
When the skies clear off.  
With sweeter roses springin',  
An' sweeter birds a-singin',  
An' all the bells a-ringin',  
When the skies clear off!

The silver—it'll jingle,  
Till your fingers tingle, tingle:  
Old friends'll meet and mingle  
When the skies clear off.  
An' trouble, like a feather,  
Will go sailin' out the weather:  
We'll sing an' dance together  
When the skies clear off!

There's a sign o' light a-comin':  
An' you hear the wagon hummin':  
You'll be marchin' to the drummin'  
When the skies clear off.  
No matter what's the trouble—  
It'll break jest like a bubble,  
An' you'll drive in harness double  
When the skies clear off!

### Fashion Notes.

Round, half-high neck is the favorite cut for evening bodices.

Velvet is used for hats for children, misses, mothers and grandmothers.

Suspensions of trains are noted on the latest importations of walking skirts.

Smooth, satin-faced cloths and rough-wool materials of medium weight are used extensively for street gowns, particularly the rough-wool crepons, and among these is a novelty called "cameo crepon." The rougher they are the more fashionable they appear.

Black satiu, silk or moire gowns are fashionably trimmed with ruches that are lined with white, amber, tan, fawn, rose or other colored satin or silk. One or three ruches may edge a skirt, and a similar ornamentation may be applied upon the waist and sleeves.

Sleeves continue to be liked immense. The difference between the sleeves of this season and last consists chiefly in the greater width at the top and sometimes a bagginess at the elbow. Shoulder seams, however, are longer, so that the fullness of the sleeve is pushed farther downward.

Cashmere is again in favor for evening wear at home, and is most artistic in fawn color, with a decoration of satin in any illuminating hue that is becoming. French cashmere is one of the most satisfactory materials made, as it endures laundering with impunity. The huge, under-draped sleeves that are now in vogue are more graceful in cashmere than in any other fabric.

Novelty goods showing a mixture of fuchsia and shaded green are effectively associated with fuchsia silk and dark-green velvet; a golden-brown cashmere is trimmed with silk and velvet ribbon to match; a gown of mixed suiting is decorated with gimp; golden-brown Fayette is combined with blue India silk; a skirt of tan crepon is edged with black fur fringe surmounted by a band of black velvet overlaid with white-lace insertion; light tan camel's hair is trimmed with black point de Gene lace.

### DOMESTIC ECONOMY.

**FRUIT CAKE (PLAIN).**—Half a pound of butter and a pound of sugar beaten to a cream, add the yolks of four well-beaten eggs, stir till light, then add the whites beaten to a stiff froth, then add one-half pound of English currants, flavor with mace, add a light pound of flour in which has been stirred a heaping teaspoonful of baking powder. Bake in a moderate oven. This is very good if eaten fresh.

**GEMS.**—Allow three cups of flour, shaken down in the cup, to one cup of cold water and one cup of sweet milk. Add the water and milk gradually, so as to smooth out the lumps. Then beat steadily just five minutes. Have ready hot and buttered gem pans. The pans should be heated very hot on top of the stove, then fill them even full. Bake a nice brown in twenty-five minutes. They can be made of graham flour.

**FRENCH BROILED STEAK.**—Cut the steaks two-thirds of an inch thick from a fillet of beef. Dip into melted butter, lay them on a hot gridiron and broil over a hot fire. When nearly done sprinkle with pepper and salt. Beat to a cream some butter and minced parsley and pour into the middle of the dish. Dip each steak when done into the butter, turning them over, and lay them round on the platter. If liked, squeeze a few drops of lemon over and serve very hot.

**CABBAGE SALAD.**—Cut a solid, tender head of cabbage very fine, and place it in a deep dish. Put in a saucepan over a rather hot fire one cupful of thick sour cream. Stir in while heating the yolks of three well-beaten eggs. Add half a teaspoonful each of made mustard and sugar, and butter the size of an egg, with a dash of red pepper and salt. While cooking stir in half a cupful of strong vinegar. This makes a smooth, thick dressing, with a delicate creamy taste. Pour over the cabbage while hot and mix thoroughly.

**MACARONI SOUP.**—Take as much good meat stock as will be needed for the quantity of soup required. Bring the stock to boiling, skim off all the scum. Chop fine one turnip, two carrots and four onions, fry them in a heaping tablespoonful of butter until a light brown, stirring constantly to prevent burning. Turn them into the boiling soup, being careful to save every particle of the butter. Now add two cloves, a blade of mace, a teaspoonful of peppercorns and salt to taste, and let it simmer two and one-half hours. While this is cooking prepare a quarter of a pound of macaroni. Break it into small pieces, wash it well in several waters. Put it into a covered saucepan with plenty of boiling water and a little salt. Let it boil rapidly for twenty-five minutes. Turn it into a colander, pour some cold water over it, let it drain thoroughly. Lay the macaroni into a warm soup tureen. Strain the boiling soup over it and serve.

### Why the American Girl Prefers the Shop or Factory.

The reason the native American girl will not become a servant, in spite of the arguments of the rational and godly, is that service is the sole employment in this country in which she can be told with impunity that she is the social inferior of anyone else. It is the telling which she cannot put up with. It is one thing to be conscious that the person you are constantly associated with is better educated, better mannered and more attractive than yourself, and it is another to be told at every opportunity that this is so. In the shop, in the factory, and in other walks of life, whatever her real superiors may think of her, they must treat her as equal. The happiness of her life, and its mainspring, too, lies in the consciousness that she is free to become the first lady in the land, and that she herself is to be her sole critic and detractor. Why is she not right in refusing to sacrifice her independence? Why should she sell her birth-right for a mess of pottage?—Robert Grant.

**Royal**  
Baking  
Powder  
Absolutely  
Pure

All other powders  
are cheaper made  
and inferior, and  
leave either acid or  
alkali in the food.



## Of Interest to Fruit Growers.

Solano Republican.

A decision of importance to fruit growers has lately been rendered in a Justice's court in Sacramento. C. A. Fisk, a fruit grower of that county, contracted to deliver to the National Fruit Association his entire crop of Bartlett pears. Before the fruit was ripe the railroad company refused to receive any freight, owing to the strike. Mr. Fisk picked a lot of pears and notified the association that he was ready to deliver. The company refused to accept the fruit or to pay for the same. He brought suit for the value of the fruit to the amount of \$299, relying on the terms of the contract. After hearing elaborate arguments on both sides, the court rendered judgment in favor of plaintiff.

The Vacaville Reporter makes a few suggestions that should meet with the hearty approval of every fruit grower in our neighborhood. It says:

Fully one-fifth of the entire fruit crop sent out of this State comes from within a radius of fifteen miles from Vacaville, and if the growers within this circle (which includes the Suisun, Vacaville and Winters fruit districts) would combine their interests, it would have a signal effect upon the control of the Eastern markets. There is no reason why this section of the State should not hold the key of success on Eastern fruit shipments. With a solid organization such as this section of the State ought to be able to put in the field, they would be able to employ one or more of their own men in the larger cities and dispose of their products, receiving the whole profit.

## A New Fruit.

Vacaville Reporter.

Mr. W. W. Smith, one of our extensive fruit raisers, has received from Louisiana a specimen of a fruit new to California which he called the casabana.

We are informed that it is of the banana family and that it ought to thrive well in this State, as the thermometer runs several degrees lower in Louisiana, where it grows successfully, than in California. It was imported into that country from India, where it is a native.

In appearance it strongly resembles, in the green state, an enormous cucumber or straight squash. When ripe it is a deep cherry red and is reported as being excellent eating, also making fine preserves.

Mr. Smith will plant the seeds and test the qualities of the fruit, and also its adaptability to the soil in this section of California.

The Engineer's List says: "A good preparation for preventing tools from rusting is made by the slow melting together of six or eight parts of lard to one of rosin, stirring till cool. This remains semi-fluid, ready to use, the rosin preventing rancidity and supplying an air-tight film. Rubbed on a bright surface ever so thinly it protects and preserves the polish effectually, and it can be wiped off clean if desired, or it may be thinned with coal oil or benzine."

A BELGIAN INVENTOR has devised an immense lamp such as has probably never been seen before. The lamp is composed of 3,000 pieces. It is 6 feet high, and measures 7.10 feet, in diameter. It is fed with lard oil, and the consumption is said to be very small, its light being so powerful that one may read by it at a distance of 600 feet.

STATE OF OHIO, CITY OF TOLEDO, Lucas County.

FRANK J. CHENEY makes oath that he is the senior partner of the firm of F. J. CHENEY & Co., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of HALL'S CATARRH CURE.

Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1894.

A. W. GLEASON, Notary Public.

Hall's Catarrh Cure is taken internally and acts directly upon the blood and mucous surfaces of the system. Send for testimonials, free.

F. J. CHENEY &amp; CO., Toledo, O.

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## Walnut Trees.



## Grenoble or Mayette Walnut.

The most complete collection of Walnuts to be found anywhere; 523 varieties, including the Mayette or Grenoble, Franquette, Parisienne, Chaberte, and Vourey, the leading market walnuts of France, all first grade, second generation seedling trees, the only class of seedlings worth planting, of all the above named varieties, besides Proparturians and Cluster. Also grafted trees.

## New Varieties of Prunes!

# "Clairac Mammoth" D'Ente!

## Or Improved French Prune.



Average Size (Cured).

The finest and largest prune ever introduced into this State, grading (cured) from 20 to 35 per pound; splendid to ship East as a plum. This season is the first one that this remarkable prune has been put on the market.

Everything else in the nut and fruit tree line. General Catalogue, with essay on grafting the Walnut, and how to redeem by grafting large, unproductive and defective walnut trees, with cuts, 10 cts. per copy.

Supplement, with Price List for the season of 1894-95, sent free on application. This supplement contains a full description of the "Clairac Mammoth."

FELIX GILLET,

Barren Hill Nursery, Nevada City, Cal.

## PACIFIC NURSERY.

Office and Greenhouses: Cor. Baker and Lombard Sts., San Francisco. Nursery at Millbrae, San Mateo Co.

GROWN WITHOUT IRRIGATION.  
Prune an Myrobalan, French, German, Bulgarian, Robe de Sargent, Clyman, Tragedy, Follenburg, St. Catherine, etc., etc., \$8 and \$10 per 100  
Apples, leading sorts, etc., etc., \$8 and \$10 per 100  
Apricots, the best varieties, etc., etc., \$10 per 100  
Almonds, the best soft-shell sorts, \$8 and \$10 per 100  
Cherries, an Mazzard, etc., etc., \$10 and \$12 per 100  
Peaches, best free and cling varieties, \$8 & \$10 per 100  
Pears, Bartlett and other sorts, \$10 and \$12 per 100  
Roses, two-year-old, field grown, newest and best old varieties, etc., etc., 20c each, \$18 per 100  
Monterey Cypress, Blue and Red Gum, in boxes, transplanted, \$1.25 & \$100, \$10 to \$12.50 & 1000  
Palm California, Japan and Australian Fan Palm, Phoenix (Date Palm), Dracena, and a large assortment of evergreen trees, deciduous trees and shrubbery. Azaleas India and Mollis, Camellias, Rhododendron, Fuchias, at low prices. F. LUDEMANN.

## THE FINEST STOCK OF Citrus and Deciduous Trees,

## BERRIES AND OTHER PLANTS,

In the State, at the Home Nurseries, Pasadena, Cal.

One and two-year-old Orange and Lemon Trees, the finest and thickest stock ever grown anywhere, and all the best varieties, also Pomelo (Grape Fruit), and the Japanese Red Dancy Tangerine Orange; also the best deciduous trees, Raspberries, Blackberries and the Wonderful Everbearing and other fine varieties of Strawberries. Nothing but the best of all varieties of Fruits and Nuts. Don't fail to write for prices to HEWITT & CORSON, Pro'ps, Pasadena, Cal.

## General Nursery Stock.

—SEND FOR PRICES.—

## \*\*\* CALIFORNIA RED PLUM.\*\*\*

This is a new plum originated in Sutter county, where it has fruited for the past six years, and ripens the last of June. I am the only propagator of this new fruit and have no hesitancy in recommending this new plum for general planting, having over 1000 trees planted. Read the following letter from the largest plum grower and shipper in the State:

WINTERS, CAL., Oct. 18, 1894.  
Mr. J. T. Bogue, Tudor, Cal. "I consider the California Red Plum the leading plum in the State. It certainly is one of the best shippers I have. It is very prolific, a fine grower, and has the qualities that go to make up a fine fruit for Eastern shipment. It is extra large, has a beautiful color when nearly hard, and will last from ten to twenty days after picking. It is earlier than the Peach Plum and fully as large. It hangs well on the tree after they will do to pick, and still remain firm and in good condition to ship. I consider it one of the best plums on the Coast. When it first begins to ripen it has a red cheek, but as it ripens it becomes a dark purple. I cannot speak in too high terms of the California Red Plum as a shipper." G. W. THISELL, Sr.

SACRAMENTO, Sept. 5, 1894.  
Mr. J. T. Bogue, Tudor, Cal. "In answer to your inquiry regarding the California Red Plum, we wish to state that from experience we have had with this Plum in the Eastern markets, the net results show that it is a very valuable Plum and we take pleasure in recommending same, believing that it is one of the best shipping and selling Plums that has ever been discovered for California shippers." Yours truly, PORTER BROTHERS COMPANY, per NATE R. SALSBURY, Vice-Pres.

JAMES T. BOGUE,

Formerly at Marysville.

TUDOR, SUTTER COUNTY, CAL.

INCORPORATED 1884.

500 ACRES

## California Nursery Company,

NILES, CALIFORNIA.

## NURSERY STOCK OF ALL KINDS.

Fruit Trees, Nut Trees, Small Fruits, Ornamental Trees and Shrubs, Palms, Flowering Plants, Etc.

SPECIALTY:—All the Italian, French and Spanish Varieties of Olives of Note—"True" Spanish Queen, Rubra, Regalis, Etc.

Write us for new Catalogues and Estimates. Prices to suit the times

JOHN ROCK, : : : : : : : Manager.

## CENTRAL NURSERY

ALL LEADING VARIETIES OF FRUIT TREES.

GOOD, THRIFTY STOCK, FREE FROM ROOT KNOT AND INSECT PESTS.

M. VAN GELDER, PROPRIETOR.

(Successor to Van Gelder &amp; Wylie.)

Write for prices on large and small orders. ACAMPO, CAL.

ESTABLISHED 1853.

## Stockton Nursery.

Get our Catalogue and Prices before purchasing your Trees or Anything in the Nursery Line.

Clean, Thrifty, Healthy Stock at Prices to Suit the Times.

E. C. Clowes, Stockton California.

ESTABLISHED 1863. THOS. MEHERIN, NURSERYMAN AND SEEDSMAN. AGENT FOR THE CALIFORNIA NURSERY CO.

## FRUIT TREES.

Large and Complete Stock of Fruit and Ornamental Trees and Plants, at prices to suit the times.

## SEEDS!

GRASS, CLOVER, VEGETABLE, FLOWER AND TREE SEEDS, ETC.

Catalogue mailed free on application. Please mention this paper.

THOS. MEHERIN, 516 Battery Street (P. O. Box 2059), San Francisco, Cal.

## ORANGE TREES at Rock Bottom Prices.

To close out a special lot of three-year buds of Med. Sweets (five-year roots), finely branched, 4x6 feet, we offer them at \$25 the hundred. Write us if you want Med. Sweets or Wash. Navels; we can give you lower prices for good trees than any one.

Cal. Fan and Cham. Excelsa Palms, Laurustinus, Dracaena Indivisa, Roses, Tuberoses, Etc., Etc.

Agents wanted in every town in Northern and Central California where we are not represented.

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FRED C. MILES, Manager  
FERNY, PLACER COUNTY, CAL.





# "THE CALIFORNIA" Mammoth New Violet

## FLORAL WONDER OF THE CENTURY

Blooms cover a Silver Dollar. Stems 12 to 14 inches long. Color—clear Violet-Purple.

We gave the Violet its glorious name—"THE CALIFORNIA." We alone have supplied the market with its blooms And we now offer the PLANTS for sale.

PRICES—One, 20 cents; Six, 85 cents; Dozen, \$1.50; Hundred, \$7.50

Plants vigorous and entirely free from Disease.

Our new handsomely illustrated General Catalogue for 1895, now ready, and mailed free.

SUNSET SEED AND PLANT COMPANY, 427-9 Sansome street, San Francisco.

## ALEXANDER & HAMMON,

RIO BONITO NURSERIES, Biggs, Butte Co., Cal.

### DECIDUOUS FRUIT TREES

OUR SPECIALTY.

The most Complete Assortment of General Nursery Stock grown on the Pacific Coast

1,000,000 Trees for the Season of 1894-95 in Stock.

Acknowledged everywhere to be equal to the best. Guaranteed to be healthy and free from scale or other pests.

Send for Catalogue and Prices. Correspondence solicited. Address:

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## MAMMOTH NEW VIOLET.

1895 Floral Wonder.

### THE CALIFORNIA.

Immense in size; stem 12 inches long. Intensely fragrant. Color Pure Violet Purple.

A STERLING NOVELTY. IT HAS CAPTURED THE SAN FRANCISCO MARKET. Last year a few thousand flowers were offered in San Francisco, and they were sold for TEN TIMES THE PRICE of Marie Louise and Russian. Plant vigorous and absolutely free from disease. Does not fade out. Last season several hundred flowers were picked from a single plant. Price of Plants on Application. Descriptive Catalogue of Seeds, Plants and Fruit Trees mailed free.

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- ★ ORNAMENTAL TREES, AND ROSES ★
- ★ CITRUS TREES. ★

Send for Descriptive Catalogue and Prices.

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## Pajaro Valley Nursery.

ALL KINDS OF FRUIT TREES.

DECIDUOUS, ORNAMENTAL AND SHADE TREES, SMALL FRUITS, ETC.

The only nursery offering the true and genuine Loganberry, one of the finest berries ever produced. None can equal it. First introduced and offered for sale at this nursery.

Send for catalogue, colored plate and circular.

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**TREES AND PLANTS** A FINE ASSORTMENT, best varieties, free from pests of any kind. Prunus, Plum, Blug, Rostraver and Murdoch Cherries; Black California Plgs; Rice Soft Shell and other Almonds; American Sweet Chestnuts; Præparatus Walnuts; Hardy mountain grown Orange Trees. Our oranges have stood 22 degrees this winter without injury. Dollar Strawberry, the best berry for home use or market. Address C. M. SILVA & SON, Lincoln, Placer County, California.

**BLUE GUMS!**  
**Monterey Cypress!**  
IN LOTS TO SUIT.

Write for Prices.  
Delivered on wharf in San Francisco.  
Address W. A. T. STRATTON,  
Seedsman & Florist, - - - Petaluma, Cal.

**FRUIT TREES.**  
FRENCH PRUNE, BARTLETT PEARS,  
Apple, Peach, Cherry, Apricot and Almond  
TREES.

First-Class Trees at very low prices.  
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Best Market Berry known; large, firm and luscious, stands travel finely, bears immensely, and has two crops a year; 30 cents per dozen; \$3 per 100. Also Strawberries, Blackberries, Gooseberries, Currants, etc., of the finest imported varieties. Prices on application. L. T. McCANN, Santa Cruz, Cal.

## Cheap Fruit Trees!

APPLE SEEDLINGS, home grown, transplanting sizes, Nos. 2 and 3.  
Also large stock of FRENCH PRUNES, PEAR and CHERRY TREES. Write for prices.

ROBERT P. EACHUS,  
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## CALIFORNIA FRUITS

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### HOW TO GROW THEM.

A Manual of Methods which have Yielded Greatest Success; with Lists of Varieties Best Adapted to the Different Districts of the State.

Practical, Explicit, Comprehensive. Embodying the experience and methods of hundreds of successful growers, and constituting a trustworthy guide by which the inexperienced may successfully produce the fruits for which California is famous. Second edition, revised and enlarged. By EDWARD J. WICKSON, A. M., Assoc. Prof. Horticulture and Entomology, University of California; Horticultural Editor Pacific Rural Press, San Francisco; Secy California State Horticultural Society; Pres. California State Floral Society, etc.

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\$300 FOR A NEW NAME.

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Barley, Corn, Oats, Peas, Wheat, Fodder Plants, Potatoes, Grasses and Clovers. In fact, our farm seed list is the most complete offered in America.

SPLENDID VEGETABLES.

Large selections, many splendid sorts. Everything cheap. Onion Seed at \$1 per lb; 35 pkgs. Earliest Vegetables, only \$1, postpaid; 10 pkts. Flower Seed, 25c. 1,000,000 Roses, Plants and Small Fruits, hardy as Oaks. Send 2c. for Market Gardener's Wholesale List; or send 5c. for Mammoth Seed and Plant Book, 144 pages, or send 10c. for Seed Book and sample above \$300 Oats.

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By mail postpaid, safe arrival and satisfaction guaranteed. Order by the letters and the numbers from this advertisement NOW, as these are introductory sets, not in catalogue, an Elegant Annual of 168 pages, which will be sent free with first order. If none of these sets suit you and you want anything in our line send for CATALOGUE FREE. About 60 pages devoted to VEGETABLES and FLOWER SEEDS, 70 to PLANTS and the balance to the CREAM OF THE FRUITS.

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EVERYTHING OF THE BEST FOR ORCHARD, VINEYARD, LAWN, GARDEN, GREENHOUSE AND CONSERVATORY. MILLIONS OF TREES, SHRUBS, VINES, ROSES, ETC.

41st YEAR. 1,000 ACRES. 29 GREENHOUSES.  
**THE STORRS & HARRISON CO., Box 160 Painesville, O.**



## Coast Industrial Notes.

—About \$5000 worth of salmon is shipped East daily from Washington State.

—The Pacific Coast Steamship Company announces a radical reduction in passenger rates from Seattle and Tacoma to Alaskan points. First-class fare is cut from \$52 to \$20, and second class \$30 to \$10.

—Robert Chabot, who recently purchased eighty acres of swamp at Long Beach, Wash., for the purpose of engaging in cranberry culture, has contracted for 480 acres more, with the intention of still further broadening out in the industry.

—Under the income tax law an unmarried woman with an estate worth \$5000 a year will be allowed the exemption of \$4000, but if she marries she will have to pay the income tax on all, which is equivalent to taxing her \$80 a year for getting married.

—There is a proposition on hand to let the State printing to the lowest bidder. During the past two years the printing bills footed up \$219,650.37, and a San Francisco publishing house has made an offer to do the same work for the next two years for \$50,000.

—During '94 there were shipped by cargo from Tacoma, Wash., 55,063,000 feet of lumber, a decrease of 7,000,000 feet compared to '93. Of the above this city took 16,952,000 feet, San Pedro, 16,647,000 feet. The valuation of the lumber shipped was about \$570,000.

—A cable forty miles in length is being run through the snowsheds in the Sierras, for the use of the telegraph service. It will be an improvement over the old system of stringing the wires on poles. Nothing short of a landslide will interfere with or cause a break in it.

—Mexican cattle sell at \$5 to \$12 a head, Mexican money, or \$2.50 to \$6 a head, American money. All the cattle a man wants may be obtained for \$3 a head, American money. Sonora cattle are on the market in abundance and are liable to stay there, says the *Border Tidette*.

—Horses are as cheap in Oregon as in this State just now. A herd of 800 head, just off the range, was sold at an average price of \$5 each, recently, and a few days ago, at a sale of fine stock near Portland, a splendid matched team of sorrel mares were sold for \$40 and a big bay horse brought only \$22.50. Half a dozen years ago such horses would have sold readily for \$100 to \$150 each.

—The valuation of foreign exports at Port Townsend last month was \$681,501, and that of imports \$124,343. The customs receipts from all sources were \$16,800.45. The value of goods from British Columbia and Oriental countries passing through the district in bond and destined to Eastern cities was \$522,335.13, of which amount goods, consisting principally of tea, to the value of \$423,970.35 were admitted free of duty.

—The big American ship Kenilworth from Honolulu takes the first cargo of Hawaiian sugar ever sent direct from the islands to New York. She can carry 3200 tons of sugar. The California Sugar Company conducts this new enterprise. It has arranged to ship two-thirds of the Hawaiian sugar to San Francisco, where it will be refined, and the remaining third to New York. As one-third of the Hawaiian crop is estimated at 30,000 tons, this will load ten of the largest American clipper ships.

## Theory of the Tides.

No theory of the tides has been offered which gives entire satisfaction to all scientists, but the one generally accepted is this: The moon, acting alone, would not only raise a wave on the side of the earth nearest to it, by gravitation, but would also draw the earth itself far enough out of its course to leave behind some of the water on the further side; which water would then be raised relatively to the earth's surface, and constitute the second tidal wave. The sun alone would act similarly, although its tide-raising effect is only about two-fifths that of the moon. At new moon the sun and moon pull together and give higher tides than at the first and third quarters, when the sun draws its right angles to the line of the moon's attraction. At full moon, when the sun is on the opposite side of the earth from the moon, virtually the same effect is observed as at new moon. The outer of the solid earth would not at that time be shifted to one side, but the double tide-raising action of the sun would again be superimposed on that of the moon and give tides on opposite sides as high as those a fortnight before.

AN ENGLISH PAPER contrasts the cost of a steamer of 3500 tons capacity built on the Clyde in December, 1889, with the cost at which such a boat may be purchased from the same builders at the present time. The former price was \$157,500 against \$107,500 at present. Machinery is the same in both cases—triple expansion, 22, 35 and 59 inches by 39 inches stroke.

## Seeds, Plants, Etc.

## PLUMS!

"Plums—tell your people to grow the best plums: they will always find a good market."

So said several of the largest handlers of fruits in Chicago when the question was asked them recently, "What is the most profitable fruit to plant now?"

Clyman. Burbank. Mikado. Normand.  
Satsuma. Tragedy. Kelsey. Diamond.  
Grand Duke. Simon. Ickworth. Pond.

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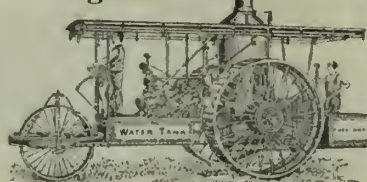
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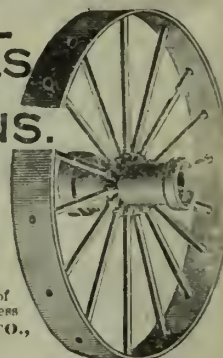
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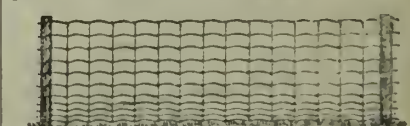
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## S. F. MARKET REPORT.

## Market Review.

SAN FRANCISCO, Feb. 6, 1895.

**FLOUR**—Fair local trade, with moderate shipping inquiry. We quote: Net cash prices for Family Extras, \$3 40@3 50 per bbl.; Bakers' Extras, \$3 30@3 40; Superfine, \$2 25@2 35 per bbl.

**WHEAT**—Activity is still a lacking feature of the situation. Two vessels cleared Monday with full cargoes for Great Britain, being the first shipment in that direction since the 21st of last month. The quantity of stock offering is still somewhat small, though quite enough to meet the requirements of exporters. Prices are steady, but not strong. No. 1 shipping is quotable at \$1 14c, with \$2 14c obtainable for choice products. Millers still take suitable offerings at the old range, say \$7 14c to \$9 14c. Walla Walla Wheat comes in for some attention at about 75c for fair average quality, 7 14c for bluestem and 8 14c for damp.

**BARLEY**—Business of late has been so small and slow that the sample market has been almost lifeless, while prices have inclined against sellers. In the speculative market there has been no pronounced activity, and the situation generally has partaken of unsatisfactory character. Yesterday, however, there was a little better business in the Call Board, with firmer tone to prices. Possibly the market may pick up and some improvement develop in both business and values. Prospects for the new crop are said to be all that could be desired, but many contingencies can arise between now and harvest time. We quote: Feed, fair to good, 75c@7 14c; choice, 7 14c; Brewing, 85c@90c per cwt.

**OATS**—Trading is not as brisk as most holders would desire. The market continues to show healthy tone, however, as receipts are not of particularly large proportions. We quote: Milling, \$1 02 1/2@1 15; Surprise, \$1 05@1 15; fancy feed, \$1 05; good to choice, 95c@1; fair to good, 90c@95c; poor to fair, 82 1/2c@87 1/2c; Black, \$1 15@1 30; Red, \$1 05@1 17 1/2; Gray, 92 1/2c@97 1/2c per cwt.

**CORN**—No large stocks on hand. The demand is light and promptly satisfied. Sales of White were made to-day as low as \$1 17 1/2, being more or less damp. Sound goods are held higher. Large Yellow, \$1 22 1/2@1 25; small Yellow, \$1 22 1/2@1 25; White, \$1 22 1/2@1 25 per cwt.

**RYE**—Is very dull. Quotable at 87 1/2c@92 1/2c per cwt.

**BUCKWHEAT**—Quotable at 80c@90c per cwt.

**CRACKED CORN**—Quotable at \$26 50@27 per ton.

**CORN MEAL**—Millers quote feed at \$26 to \$26 50 per ton; fine kinds for the table in large and small packages, 3c@3 1/2c per lb.

**OILCAKE MEAL**—Quotable at \$25 per ton from the mill.

**COTTONSEED OILCAKE**—Scarce and nominal.

**MIDDLINGS**—Quotable at \$17 50@19 per ton.

**BRAN**—Quotable at \$12@13 50 per ton.

**GROUND BARLEY**—Quotable at \$17 50@18 per ton.

**FEED**—Manhattan Horse Food (Red Ball Brand) in 100-lb. cabinets, \$8; Manhattan Egg Food, 100-lb. bags, \$11 50.

**VARIOUS**—We quote: Rye Flour, 3 1/2c; Rye Meal, 3c; Graham Flour, 3c; Oatmeal, 4 1/2c@5c; Oat Groats, 5c; Cracked Wheat, 3 1/2c; Buckwheat Flour, 5c; Pearl Barley, 4 1/2c@4 3/4c per lb.

**HAY**—The market is becoming better stocked. Nearly 500 tons came in yesterday. Prices have a declining tendency, and sales at top figures are only possible when the offering is strictly choice. Wire-bound Hay sells at \$1 per ton less than rope-bound Hay. Following are the wholesale city prices for rope-bound Hay: Wheat, \$9@12; Wheat and Oat, \$8 50@11; Oat, \$9@11; Alfalfa, \$8@10; Barley, \$8@10; Clover, \$9@10; compressed, \$8 50@11; Stock, \$8@10 per ton.

**STRAW**—Quotable at 70c@80c per bale.

**BEANS**—There has been no change in the general condition of the market for a week. Trade is slow and the situation lacks vim. Choice Whites are held with steadiness, while defective stock sells at irregular figures. Colored descriptions are weak, being more or less neglected. We quote as follows: Bayos, \$1 75@1 90; Butter, \$1 75@1 80 for small and \$2@2 25 for large; Pink, \$1 10@1 35; Red, \$1 60@1 65; Lima, \$4 10@4 25; Pea, \$2 25@2 50; Small White, \$2 25@2 55; Large White, \$2 10@2 30; Blackeye, \$2 75@3; Red Kidney, \$2 75@3; Horse, \$1 60@1 70 per cwt.

**DRIED PEAS**—We quote: Green, \$1 25@1 50; Niles, \$1 10@1 25 per cwt.

**SEEDS**—Trade of light order. We quote as follows: Mustard, Brown, \$1 50@1 75; Yellow, \$2 25@2 45; Trisee, \$2 15@2 25; Canary, 3c@4c; Hemp, 3 1/2c@4c; Rape, 1 1/2c@2 1/4c; Timothy, 5 1/2c@6 1/4c; Alfalfa, 7 1/4c@7 1/2c per lb; Flax, \$2 25@2 50 per cwt.

**POTATOES**—New descriptions are in lighter receipt at steadier prices. We quote as follows: Volunteer New Potatoes, 1 1/2c@2c per lb; Early Rose, 40c@45c; River Reds, 30c@35c; Burbanks, 30c@40c; Oregon Burbanks, 40c@50c; Salinas Burbanks, 75c@81c; Sweeties, 75c@81c for Rivers and \$1 35@1 75 per cwt for choice stock.

**ONIONS**—Fancy stock sold at a further advance yesterday. Quotable at 85c@1 10 per cwt.

**VEGETABLES**—Receipts are quite light. Arrivals yesterday were 7 bxs Asparagus and 19 bxs Rhubarb. Consignments of Cucumbers from San Rafael are unsalable, being very small. Only desirable stock brings quoted figures. We quote as follows: Hot-house Cucumbers, 75c@81c per dozen; Asparagus, 17 1/2c@25c per lb; Rhubarb, \$1@1 25 per box; Los Angeles Tomatoes, \$1@1 25 per box; String Beans, 80c@1c per lb; Green Peas, 60c@65c per lb; Marrowfat Squash, \$8@10 per ton; Hubbard Squash, \$8 per ton; Green Peppers, 20c@4c per lb; Turnips, 50c per cwt; Beets, 60c@75c per sack; Carrots, 30c@50c; Cabbage, 30c@40c per cwt; Garlic, 30c@4c per lb; Cauliflower, 30c@40c per dozen; Dried Peppers, 12 1/2c@15c per lb; Dried Okra, 12 1/2c per lb.

**FRESH FRUIT**—Apples of strictly select character are none too plentiful, while stocks of common grades are rather liberal. Persimmons are not worth quoting any longer. We quote: Apples, 40c@51c per box, with occasionally \$1 25 for something fancy.

**CITRUS FRUIT**—There has been a little more inquiry for Oranges within a few days, without any improvement in price, as stocks continue of goodly proportions. Trade auction sales of Oranges are now held regularly three times a week. California Navels, \$1 50@2 75; Seedlings, \$1@1 75 per box; Souora Oranges, \$1 25@1 50 per box; Mexican Limes, \$4 50@5 per box; California Limes, in small boxes, 50c@75c per box; Lemons, Sicily, \$3@3 50; California Lemons, 75c@81c per box and \$1 50@2 50 for good to choice.

**TROPICAL FRUITS**—Fresh supplies of Hawaiian Bananas are expected to-day by steamer.

**DRIED FRUIT**—There is improved inquiry, with moderate volume of trade. Sun-dried Apples are pretty well cleaned up, and evaporated descriptions are rather firm in consequence. Apricots and Peaches are steady in price, especially lots that are desirable. London layer Raisins are in

limited offering, but there is plenty of loose, in bags, which are slow of sale and easy in price.

Following are the prices furnished by the Fruit Exchange. The figures presented represent carload lots, small parcels occasionally selling at slightly lower rates:

Apricots—Fancy Moorpark, 8 1/2c; choice, do, 8c; fancy, 7 1/2c; choice, 7c; standard, 6 1/2c; prime, 6c. Apples—Evaporated, 5 1/2c@7c; sun-dried, 4@5c. Peaches—Fancy, 8 1/2c; choice, 6c; standard, 5 1/2c; prime, 5 1/4c; peeled, in boxes, 12@13c. Pears—Fancy, halves, 5 1/2c; quarters, 4 1/2c; choice, 4 1/4c; standard, 3 1/2c; prime, 3c. Plums—Pitted, 4@5c; unpitted, 1 1/2@2c. Prunes—Four sizes, 4 1/2@4 3/4c. Nectarines—Fancy, 7c; choice, 6 1/2c; standard, 6c; prime, 5 1/2c.

Figs—White, choice, 5@5 1/2c; Black, choice, 1 1/2@2c.

Raisins—In sacks (50-lb. boxes selling at 1/4c per lb. higher): 4-crown, loose, 4c; 3-crown, 2 1/2c; 2-crown, 2c; seedless Sultanas, 3c; seedless Muscates, 2c per lb; 3-crown London Layers, \$1 25 per box in 20-lb. boxes; clusters, \$1 50; Dehesa clusters, \$2; Imperial clusters, \$3; 4-crown, loose, \$1 15; 4-crown, loose, faced, \$1 25 per box. Dried Grapes—1 1/2c per lb.

**NUTS**—Values unchanged. Trade of jobbing character. We quote: Chestnuts, 8@10c; Walnuts, 5@7c for hard shell, 7@9c for soft shell and 7@9c for paper shell; California Almonds, 7 1/2@8 1/2c for soft shell, 5@5 1/2c for hard shell and 8 1/2@9c for paper shell; Peanuts, 4 1/2@6c; Hickory Nuts, 5@6c; Filberts, 8 1/2@9c; Pecans, 6c for rough and 8c for polished; Brazil Nuts, 7@7 1/2c per lb; Coconuts, \$5@5 50 per 100.

**HONEY**—Stocks are light, but prices are lower, there being no demand. We quote: Comb, 10@12c; water white extracted, 7@7 1/4c; light amber extracted, 5 1/2@6c; dark amber, 4 1/2@5c per lb.

**BEESWAX**—Quotable at 25@27c per lb.

**HOPS**—No local trade. It is said that there are buyers for choice lots at about 6c, but holders are not inclined to make concessions on asking prices. Distant centers are reported to be showing better tone. Quotable at 4@7 1/2c per lb.

**BUTTER**—Receipts from northern directions are light, but there is increase in supplies from the lower coast and around the bay. Arrivals are in excess of local demands, while shipping trade is of insignificant proportions, so that the market has very soft tone all around. We quote as follows: Fancy creamery, 20@21c, with sales at 22c; fancy dairy, rolls, 14 1/2@15c; good to choice, 13@14c; fair, 12@12 1/2c; store lots, 10@11c; pickled roll, 13@15c; brick, 14@15c per lb.

**CHEESE**—Stocks are not heavy, but offerings are ample for all present wants, while prices are not firm. We quote: Choice to fancy, 8@9c; fair to good, 6@7c; Eastern, ordinary to fine, 11@14c per lb.

**EGGS**—Have again declined, and it is doubtful if bottom prices have yet been reached. We quote: California Ranch, 18@20c; store lots, 15@17c per dozen.

**POULTRY**—The market continues in bad shape for sellers. Stocks of all kinds are excessive, and it will take some days for dealers to clean up under ordinary trade requirements. If there be further arrivals of Eastern product, the situation is likely to become more demoralized. Buyers just now have everything their own way. We quote: Live Turkeys—Gobblers, 8c; Hens, 8@9c per lb; dressed Turkeys, 8@10c per lb; Roosters, 8@9c per lb; for old, and \$4@4 50 for young; Fryers, \$3@4 for small and \$4@4 50 for large; Broilers, \$4 50@5; Hens, \$3@4 50; Ducks, \$4 50@5 50; Geese, \$1 50@1 75 per pair; Pigeons, \$1 25@1 50 for old and \$2@2 25 per dozen for young.

**GAME**—Keeps low in price; demand light. We quote: Rabbits, 50c; Quail, \$1@1 25; Canvasback, \$2 50@3; Mallard, \$2 50@3; Sprig, \$1 75@2; Teal, \$1 25; Widgeon, \$1 25; small Ducks, 75c@81c; English Snipe, \$1 75@2; common Snipe, \$1@1 25; Brant, \$1 25@1 50; Gray Geese, \$2@2 50; White Geese, \$1 @1 25; Rabbits, \$1 25@1 50; Hare, \$1 per dozen.

**CURED MEATS**—Values are unchanged, though firmness is not a feature of the situation. We quote as follows: Eastern Sugar-cured Hams, 11@11 1/2c per lb; California Hams, 10@10 1/2c; Bacon, Eastern, extra light, sugar-cured, 13c medium, 8 1/2c@9c; do, light, 9@10c; extra light, 11@12c per lb; Pork, extra clear, bbls, \$18 50@19; half bbls, \$9 50@10; Pig Pork, bbls, \$20 50@21; hf bbls, \$10 50@11; Pigs' Feet, hf bbls, \$4 50; dry salted Pork, 8 1/2c@9c per lb; Beef, mess, bbls, \$7 50; do, extra mess, bbls, \$8 50; do, family, \$10; extra, do, \$10 50@11 per bbl; do, smoked, 9@10c; Pickled Tongues, hf bbls, \$7.

**LARD**—We quote as follows: Eastern Lard, compound, tierces, 6 1/2@6 3/4c; do, prime, steam, 8 1/2c; Eastern, pure, 10-lb pails, 9 1/4c; 5-lb pails, 9 1/2c; 3-lb pails, 9 1/2c; California, 10-lb tins, 7 1/2@8c; do, 5-lb, 8@8 1/2c; California pure, in tierces, 7 1/2@8c; do, compound, 6@6 1/4c per tierce.

**WOOL**—Movement is slow and the market will doubtless keep in such a condition until the spring season opens. Prices are believed to have reached bedrock, though the outlook for any very marked improvement is not considered particularly bright or encouraging. We quote Fall:

Free Northern, 7 @ 8 1/2c  
Northern, defective, 5 @ 7  
Southern & San Joaquin, light and free, 5 @ 6  
Do, defective, 3 @ 4

**HIDES AND SKINS**—Quotable as follows:

|                                  | Sound.    | Culls.  |
|----------------------------------|-----------|---------|
| Heavy Steers, 54 lbs up, per lb. | 6 1/2@7 c | 5 1/2@6 |
| Medium Steers, 42 to 55 lbs.     | 5 1/2@6   | 5 @ 6   |
| Light, 42 to 47 pounds.          | 4 @ 5     | 3 1/2@4 |
| Cows, over 50 lbs.               | 5 @ 6     | 4 @ 5   |

Light Cows, 30 to 50 lbs. 4 @ 3 1/2  
Stags, 17 to 30 lbs. 3 @ 2  
Kips, 17 to 30 lbs. 4 1/2 @ 3 1/2  
Veal Skins, 10 to 17 lbs. 5 1/2 @ 4 1/2  
Calf skins, 5 to 10 lbs. 7 @ 6  
Dry Hides, usual selection, 9c; Dry Kips, 7@7 1/2c; Calf Skins do, 12@13c; Cull Hides, Kip and Calf, 6@8c; Pelts, Sbearings, 10@20c each; do, short, 25@30c each; do, medium, 30@40c each; do, long wool, 40@70c each; Deer Skins, summer, 25@30c; do, good medium, 15@22 1/2c; do, winter, 5c per lb; Goat Skins, 20@35c apiece for prime to perfect, 10@20c for damaged, and 5c each for Kids.

**TALLOW**—We quote: Refined, 5 1/2@6c; rendered, 4 1/2c; country Tallow, 3 1/2@4c; grease, 3c per lb.

## MEAT MARKET.

Sheep are not arriving freely and Mutton quotations are steady. No Spring Lamb in any quantity has yet come forward. Following are the rates for whole carcasses from slaughterers to dealers:

**BEEF**—First quality, 5@5 1/2c; second quality, 4 1/2c; third quality, 3 1/2@4c per lb.

**CALVES**—Quotable at 4 1/2@5 1/2c for large and 5@7c per lb. for small.

**MUTTON**—Quotable at 5@6 1/2c per lb.

**LAMB**—Quotable at 6 1/2@7 1/2c per lb. for yearlings. Spring Lamb would likely bring 15c.

**PORK**—Live Hogs, on foot, grain fed, heavy and medium, 3 1/2c; small Hogs, 4c; dressed Hogs, 5 1/2@6 1/4c per lb.

## Fruit Exchange Bulletin.

Following is Bulletin No. 36 of the California Fruit Exchange in its full official form:

SAN FRANCISCO, Feb. 6, 1895.

The dried fruit market remains as last week, subject to same quotations, with few sales but rather more inquiry, indicating a probability of business soon. The small prunes (above 100), which were practically unsalable two months since, have now been pretty much bought up and shipped to fill the demand for "cheap goods" which exists in all lines this year. We can learn of no considerable stocks of this class of prunes remaining on this coast. Apparently the market will now have to take our remaining "four sizes" before long.

Instead of repeating in detail our quotations of last week, we give in full a letter from our correspondent at Minneapolis, showing the exact condition of that market, which may be considered upon the whole typical of other markets. The quotations are "spot," that is Minneapolis prices, except where specially quoted "f. o. b. coast."

MINNEAPOLIS, Jan. 31, 1895.

Market in Minneapolis and St. Paul seems to be doing some better on most articles so far as the demand goes, but not much improvement in prices. Spot stocks in the hands of green-fruit commission houses still are the bugbear and stand in the way of decent figures being realized by legitimate dealers.

Peaches—Have been sold within a week on basis of 7 1/2c for good, choice stock—bright, handsome fruit, even size. Poor fruit, whether American bleached or Chinese bleached, going begging at 5 1/2@6c. Some demand for fancy fruit—large, heavy, meaty, bright stock—at 8 1/2@9c. Stocks not heavy, and much better demand to come, we are sure.

Apricots—Are the weak sister of the family. The trouble is that too many poor ones have been in the market, which has hurt the demand materially. Had there been more good apricots, more of every kind could have been sold. As it is, the demand has fallen off so that our dealers are afraid to buy anything. Chicago jobbers are selling fruit to the retail trade at less than our jobbers here have had any opportunity to buy.

This is because so many growers know no other market than Chicago and keep it glutted with consigned stocks.

Choice fruit—as the season goes—is in some demand at about 7 1/2c, while a real, strictly choice, bright, handsome apricot would bring 8c easily enough. Fancy Moorpark is not considered at the value being placed on some spot stocks—9 1/2@10c.

Prunes—Demand light. Hard to get any one interested on basis of 4 1/2c coast. There have been sales of several cars of choice stock averaging about 135 at 3c, delivered out of spot stocks held here, followed by sales of some more at 3 1/2c for shipment from the coast. Not heavy stocks here; sure to be quite a little more demand as spring opens.

Raisins—Heavy stocks owned bought at 2 1/2@3 1/4c delivered. Some little buying of fancy stocks three-crown at 3 1/2c here, but little interest manifested on this basis, stocks being so heavy that jobbers prefer to run them out and then buy again when they are entirely out, if necessary, rather than pay prices now ruling on the coast.

Pears—No demand at all except for heavy, handsome fruit, some of which has been sold out of spot stocks as low as 5c, here within the last week or two, this being easily half a cent to a cent under the coast market so far as we know it.

Walnuts—Market very lightly supplied and good stock wanted. Poor stocks here which will not sell at any price.

Almonds—In larger supply, though some buyers

are calling for good stock, but don't want cheap stock at any price, they say.

The thermometer standing from zero to 25° below steadily for several weeks has frozen up everything pretty tight. Wheat at 40c, in the country does not make a heavy purchasing power; still we are looking for fair business this spring when it comes.

The above explains very well why goods do not sell freely at the prices we quote. The principal markets being choked with consigned goods, trade at such prices as will be accepted here is confined to such orders as can be obtained from the smaller markets, which consignments do not reach, and the majority of these markets are supplied by large houses in principal centers which buy the consigned lots as fast as they are brought to the sacrifice, and sell them at a good profit just below what holders on this coast will deliver for.

CALIFORNIA FRUIT EXCHANGE,  
By EDWARD F. ADAMS, Mgr.

## A First-Class Motor.

At the present time, gas engines receive due attention wherever motive power is required. Among the best, and deserving careful consideration from those who contemplate buying, is the Perkins Gas or Gasoline engine, manufactured by the Perkins Pump and Engine Company, 117 Main street, San Francisco. Its claims to superiority are too many to give here in detail. But that it is a plain, sensible engine with few parts, and those thoroughly well made, very simple and economical to operate, is acknowledged by those who have given it a practical trial.

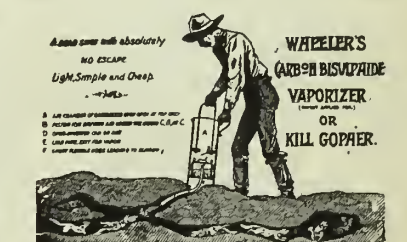
## Market Gardeners Grow Rich!

There is lots of money made in early vegetables. Everybody admits that the very earliest vegetables are produced from Salzer's Northern grown seeds. Think of having radishes in fourteen days; lettuce in twenty days; potatoes in forty days; peas in forty-six days; and splendid cabbage in fifty-five days from day of sowing seed!

## If You Will Cut This Out and Send It

with \$1 money order to the John A. Salzer Seed Company, La Crosse, Wis., you will get free thirty-five packages earliest vegetable seeds and their great seed catalogue, or for six cents postage a package of FOURTEEN-DAY PARIS RADISH SEED and their seed catalogue.

**5/A HORSE BLANKETS**  
ARE THE STRONGEST.  
Made in 250 Styles.  
For either road or stable use.  
All shapes, sizes and qualities.  
WM. AYRES & SONS, PHILADEL.



## Destroy the Gophers!

You may now grow alfalfa on the uplands and save garden, trees and flowers.  
Price \$2. Sold by the trade or by manufacturer of  
**WHEELER'S CARBON BISULPHIDE**,  
Utah and Alameda Sts., San Francisco.

**School of Practical, Civil, Mechanical, Electrical and Mining Engineering, Surveying, Architecture, Drawing and Assaying**  
**723 MARKET STREET,**  
SAN FRANCISCO, CAL.

Open All Year. : **A. VAN DER NAILLEN, Pres't.**  
Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. Established 1864. Send for Circular.

# "ACME" PULVERIZING HARROW, CLOD CRUSHER and LEVELER.



**AGENTS WANTED.**  
Variety of sizes suitable for all work.

Adapted to all soils and all work.—Flat crushing spurs pulverize lumps, level and smooth the ground, while at the same time curved coulters cultivate, cut, lift and turn the entire surface of the soil. The backward slant of the coulters prevents tearing up rubbish and reduces the draft.

Made entirely of cast steel and wrought iron—**PRACTICALLY INDESTRUCTIBLE.**

## Cheapest Riding Harrow on Earth.

Sells for about the same as an ordinary drag.

An extensive fruit grower in Fresno County says:—"The 'ACME' Harrow has been the past season in our orchard proved that it is the 'boss' of all. Candidly we are convinced that it saved our orchards in the past dry season by placing the surface in good order which answered as a mulch and retained what moisture fell during the winter and spring of 1894. We can show a growth on apple trees this dry season of 7 feet and over. We only had 2 1/2 inches of rain to produce this growth. We did this, we believe, by the use of the 'ACME' Harrow, and cheerfully recommend it in preference to any tool made for a cultivator."

N. B.—I deliver free on board at PORTLAND and SAN FRANCISCO.

**DUANE H. NASH, Sole Manufacturer, MILLINGTON, N. J. and 30 South Canal Street, CHICAGO, ILL.**  
(Mention This Paper.)



## Patrons of Husbandry.

From Yuba City Grange.

TO THE EDITOR:—Our grange met regularly on Saturday last, and there was a good attendance of bright and smiling faces. From this you will doubtless infer that the attendance of the fair sex largely predominated.

Sure enough, since my last letter not a drop of rain has fallen, and the sun and north wind have done much to improve the situation of two weeks ago. The roads are once more dry and hard, a fact that contributed largely to the numbers at the meeting. But the good weather has also benefited the wet soil; hence a large per cent of the men remained at home following the plow.

The meeting developed no important business, so after routine matters were disposed of a recess was declared, during which the audience was treated to one of the best literary efforts ever presented. The programme consisted in part of a conundrum guessing match which resulted in a draw. The questions were good and covered all sorts of conditions in life, but are too numerous to mention. Then we had a pantomime, made up of love making and tragedy, which was rendered so true to life that the audience found no difficulty in supplying the words to suit the gestures. The hero at last secured his prize and toted her off amid the congratulations of the company in the play, and the laughter of the audience. But alas! to our horror, just as the train was about to go out of sight around the curve, it left the track and tumbled into the ditch. Not having attained great speed, our friends emerged from the wreck unhurt, and the curtain fell. Music, vocal and instrumental, select readings and impromptu remarks were a prominent feature in the exercises.

The grange was honored by the presence of Bro. E. C. Shoemaker, of Tulare, steward of the State Grange, who seemed to enjoy the performance very much, and being called up for remarks, said the session reminded him of the good old grange times in Pennsylvania. He gave us a good fraternal talk, and was glad to have been able to visit our grange. Bro. Shoemaker has a large field before him, and we all hope and believe him equal to the emergency.

GEORGE OHLEYER.

Yuba City, Feb. 4, 1895.

From Magnolia Grange.

HIGHLAND RANCH, Jan. 23, 1895.

TO THE EDITOR:—Magnolia Grange was unable to hold its December meeting on account of bad weather, so a special meeting was held on the last Saturday in January for the purpose of installing officers for the current year. The meeting was well attended, and the new officers and all the members, in fact, expressed themselves as willing to try and make the work of the grange more interesting in the future. I hope this feeling will show itself in every grange in the State from now on. Come, brothers and sisters, let us wake up and each one contribute his or her mite to make the work of the order what it was intended to be—the grandest and the best ever instituted for the isolated farmer and his family.

V. W. S.

[The above, having been misdirected, came too late for last week's issue.—Ed.]

On January 26th Magnolia Grange installed the following officers, Past Master D. Bilderbeck acting as installing officer: Master, T. P. Cannon; Overseer, C. D. Bilderbeck; Lecturer, W. H. Cunningham; Steward, Lee Bilderbeck; Assistant Steward, Robert Elder; Chaplain, V. W. Still; Treasurer, J. W. Gautier; Secretary, Mrs. A. M. Still; Gate Keeper, Frank Rollins; Pomona, Mrs. Ida Cannon; Flora, Miss Bessie Still; Ceres, Mrs. J. R. Nickerson; Lady Assistant Steward, Mrs. Robert Elder.

## Irrigation Run Wild.

The *Irrigation Age* contains some entertaining correspondence. It appears that a Mr. Young wrote an article for the above paper under the title of "The Mighty Colorado and Its Irrigation Possibilities," which article contained some statements remarkable enough to stir up R. B. Stanton, who happens to know something about the Colorado, as well as the country in question, and Mr. Stanton replies to Mr. Young at some length. Mr. Young says that there are millions of acres awaiting irrigation and suggests that where this land is shut in by high ground, tunnels and siphons could be used, which is a simple suggestion to make. He proposes that a dam should be built somewhere along the course of the Colorado and its waters diverted into Death valley, filling that valley and reclaiming the surrounding desert. A map given by Mr. Young locates definitely the position for the dam, and the course of the canal and the country to be irrigated. An examination of the contour maps of the United States Geological Survey discloses some interesting facts. It shows that the proposed canal would be 150 miles long, and that, as high land with several mountain ranges lies between the Colorado river and Death valley, the canal may be made with only one through cut. This, however, would be 150 miles long and have a maximum depth of 2500 feet. Mr. Young suggests, however, that a tunnel might be used which would be only 125 miles long. To get the water from Death valley to the various tracts to be irrigated would require only two more open cuts, one of 50 miles and another of 150. Mr. Stanton suggests that it would be folly to stop there, but the canal should go straight on through the Sierra Nevadas and turn the surplus water into the San Joaquin valley, which would take only one more tunnel about 125 miles long.

## List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING JANUARY 22, 1895.  
532,869.—GAS ENGINE—Covey & Haines, Stockton, Cal.  
532,950.—CLOSET SEAT, ETC.—F. G. High, S. F.  
532,898.—BUCKLE—W. A. O'Bar, Everett, Wash.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible by mail or telegraphic order. American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

## COULD HARDLY WALK ON ACCOUNT OF RHEUMATISM

P. H. FORD

—OF—

Quachita City, La.,

After

TWO YEARS  
Suffering

IS CURED

—BY—

THE USE OF

Ayer's Sarsaparilla

"For fully two years, I suffered from rheumatism, and was frequently in such a condition that I could hardly walk. I spent some time in Hot Springs, Ark., and the treatment helped me for the time being; but soon the complaint returned and I was as badly afflicted as ever. Ayer's Sarsaparilla being recommended, I resolved to try it, and, after using six bottles, I was completely cured."—P. H. Ford, Quachita City, La.

Ayer's The Only Sarsaparilla

Admitted

AT THE WORLD'S FAIR

\*\*\*\*\*

If It's a Sprain, Strain, or Bruise  
**St. Jacobs Oil**  
Will Cure It

## ASPINWALL POTATO-PLANTER

We manufacture the celebrated Aspinwall Potato Planter, Aspinwall Potato Cutter, Aspinwall Paris Green Sprinkler, etc. Every machine warranted. These machines greatly reduce the cost of raising potatoes. Send for Free Illustrated Catalogue.

ASPINWALL MANUFACTURING CO., 48 Sabin St., Jackson, Mich.

HOOVER & CO., Agents, 16 and 18 Drumm Street, San Francisco, Cal.

## FOLDING SAWING MACHINE.

9 CORDS IN 10 HOURS.  
RUNS EASY.  
SAWS DOWN TREES.  
FOLDED

BY ONE MAN.  
Send for free illustrated Catalogue, showing testimonials from thousands who have sawed from 5 to 9 cords daily. It saws down trees, folds like a pocket knife, weighs only 41 lbs., easily carried on shoulder. One man can saw more timber with it than two men with a cross-cut saw. 67,000 in use. We also make larger sized machine to carry 7-foot saw.

JAMES LINFORTH.

37 Market St., San Francisco.

## FOR SALE!

Twenty or Fifty Acres of a

## Fruit Ranch

In Lagoon Valley, near Vacaville, Solano County, Cal. French Prunes, Bartlett Pears and Cherries in full bearing. House with modern improvements.

C. H. STEINMETZ,

Vacaville, California  
Or 126 Kearny Street, San Francisco.

## Gravity and Pump Irrigation

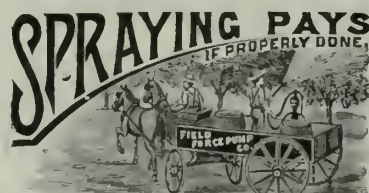
### GOVERNMENT AND TITLED LAND.

Individual and colony tracts. Early semitropical land. Investment and development.

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Second Floor, Room 3, Mills Building, S. F.

IF YOU WANT A SMALL FARM ON MOST favorable terms, address  
S. C. TRAYNER,  
Marysville, California.



OUR PUMPS have Automatic Agitators and do it right. Our GARFIELD KNAPSACK and EMPIRE KING lead all others. Everybody says so. Catalogue and instruction book, 4 cents. Circulars free. FIELD FORCE PUMP CO., 321 Bristol Ave., Lockport, N. Y.



Position as Manager on a Large Farm. Thorough acquaintance with Stock Raising, Dairy Business, General Farming. Experience in foreign countries: French, English, German correspondence; Bookkeeping; Graduate of Agricultural Academy in Germany. P. O. box 1835, Bakersfield, Kern County, Cal.

## "THE MARKET GARDEN,"

A MONTHLY JOURNAL FOR MARKET GARDENERS AND TRUCKERS. 50c. a year in advance. Sample copy mailed Free on application. Address  
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LIGHTNING WELL MACHINERY Works.  
All kinds of tools. Fortune for the driller by using our Adamantine process; can take a core. Perfected Economical Artesian Pumping Rigs for work by Steam, Air, etc. Let us help you. THE AMERICAN WELL WORKS, Aurora, Ill.; Chicago, Ill.; Dallas, Tex.

## GRANGERS' BANK

OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 1874



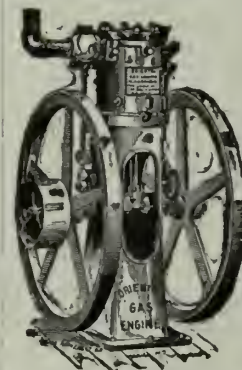
Capital Paid Up.....\$1,000,000  
Reserve Fund and Undivided Profits, 130,000  
Dividends Paid to Stockholders.... 832,000

—OFFICERS—

A. D. LOGAN.....President.  
I. C. STEELE.....Vice-President.  
ALBERT MONTPELLIER.....Cashier and Manager.  
FRANK MCULLEN.....Secretary.

General Banking. Deposits Received. Gold and Silver. Bills of Exchange Bought and Sold. Loans on Wheat and Country Produce a Specialty.  
January 1, 1894. A. MONTPELLIER, Manager.

## The Oriental Gas Engine



IS THE BEST because it combines simplicity of construction with power and economy of space. It can be run with natural or manufactured gas or gasoline at a cost of 20 to 25 cents per horse power per day.

It can be used for pumping purposes, as well as for all purposes where a perfect engine is required, with the advantage of lessening the risk of explosion. No licensed engineer at a high salary needed to operate it.

Send for circulars and prices if a good safe engine is what you need.

## The Oriental Launch is Perfection.

M. A. GRAHAM,

Inventor and Manufacturer.

105 Beale Street, San Francisco.

## THE Porteous Improved Scraper.

Patented April 3, 1883. Patented April 17, 1883.



Manufactured by G. LISSENDEN.

The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Leveling Land, Road Making, etc.

This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

This Scraper is all Steel—the only one manufactured in the State.

Price, all Steel, four-horse, \$40; Steel, two-horse, \$31. Address all orders to

G. LISSENDEN, STOCKTON, CAL.

## PILES.

BICURA TREATMENT CURES THEM. Sent postpaid for 50c. BICURA CO., 310 California St. San Francisco.



## New Land Office Rulings.

The Secretary of the Interior has recently rendered the following new decisions:

First—Land embraced within the claim of a qualified settler at the date a railroad grant becomes effective and is excepted by such claim from the operation of the grant.

Second—Evidence of voting will raise a presumption of citizenship, as fraud on the part of the voter is not to be presumed.

Third—The sale of a soldier's additional homestead right and attempted transfer thereof by power of attorney, to locate the right of said certificate, is made good in the hands of the purchaser by the act of August 18, 1894, and such purchaser is accordingly entitled to the possession of the certificate.

Fourth—Timber and land entries made for speculative purposes are fraudulent and will be canceled.

Fifth—In the investigation of a case where fraud is alleged against an entryman, proof of other acts of similar nature done contemporaneously, or about the same time, is permissible to show such extent.

Sixth—Repayment of fees and commission may be allowed where the entryman, to avoid conflict resulting from an error in the local office, in good faith, relinquishes his entry and takes another tract.

Seventh—A deserted wife may make a homestead entry, with credit for previous residence on the land, where her husband's entry thereof is canceled for failure to make final proof within the statutory period.

Eighth—A joint entry cannot be allowed where there is but one residence and set of improvements maintained and occupied in common by the parties, with the intention to take separate tracts when the land is open to entry.

Ninth—The possession and occupancy of a tract by a qualified settler at a definite location of a railroad grant, serve to except the land covered thereby from the operation of the grant, even though the settler at such time supposed the land belonged to the railroad company.

Tenth—The expiration of a pre-emption filing without final proof and payment, will not alone be accepted as proof of abandonment of the settlement claim at such time so as to relieve a railroad grant therefrom.

"BROWN'S BRONCHIAL TROCHES" are the simplest, quickest and most effectual remedy for Bronchitis, Asthma and Throat Diseases.

## OLIVE TREES.

MISSION, MANZANILLO, NEVADILLO, RUBRA, COLUMELLA, PICHOLINE, REGALIS and UVARIA.

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A Complete Assortment of

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ROSES, PALMS, MAGNOLIAS, ETC.

## VEGETABLE, FLOWER and FARM SEEDS! SEEDS!

Descriptive Catalogue and prices on application.

## TRUMBULL &amp; BEEBE,

Seedsmen and Nurserymen,

119-121 Sansome Street, San Francisco, Cal.

## 400,000 PRUNE, PLUM, PEACH, CHERRY AND PEAR TREES,

Four to six feet, for sale at cut rates. No better trees in California. Terms and discounts satisfactory. Any trees not perfectly satisfactory return at our expense. Address

OSCAR KNOTT,

Walnut Grove, California.

## TREE - WASH. Olive Dip.

"Greenbank" Powdered Caustic Soda and Pure Potash.

T. W. JACKSON & CO.

Sole Agents. - - - No. 226 Market Street SAN FRANCISCO, CAL.

## A Ferocious Stallion.

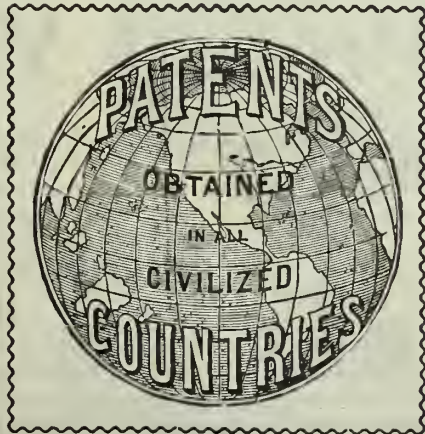
Salinas Ind.

The well-known stallion Napa Wilkes attacked its attendant, John Gately, at Dr. G. F. Faulkner's veterinary establishment on Alisal street, inflicting injuries that will probably cripple the young man for life. Gately had just led the horse to water and was in the act of tying it up in the stall when the animal seized him by the left arm with its powerful jaws and commenced biting him ferociously. Gately's cries attracted Warren Johnson, Frank Abbott and others to the scene, but their efforts were unavailing to cause the savage brute to release its victim. They beat the stallion over the head with a pitchfork, prodded it with the tines and jabbed out one of its eyes, but the more they punished the infuriated brute the more ferocious it became, tossing its victim about, slamming him against the manger and all the while crunching his arm. As a last resource a pistol was procured, with which J. L. Jones shot the animal, the bullet entering behind the foreleg and passing through the lungs. In a few seconds the horse relaxed its hold, dropped Gately, and fell dead in its tracks.

Dr. T. C. Edwards was summoned and he dressed the young man's arm, which was found to be badly lacerated, but with no bones broken. There were some severe contusions about his side and chest, caused by the horse flinging him against the manger, but it is thought that no serious internal injuries were received. At first it was supposed that amputation might be necessary, but it is now thought that the same can be avoided. Gately has been in Faulkner's employ for the past two years, and he is an estimable young man.

Napa Wilkes was owned by Baker & Hamilton, of San Francisco. This stallion was foaled at Corbett's San Mateo stock farm in 1884, and was by Guy Wilkes 2:15, dam Napa Maid by Irvington, a son of Rysdyk's Hambletonian. Quite a number of promising young horses in this vicinity were sired by Napa Wilkes.

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OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library, containing official American reports, with full copies of U. S. patents since 1872. All worthy inventions patented through Dewey & Co's Patent Agency will have the benefit of a description in the *Mining and Scientific Press*. We transact every branch of patent business, and obtain patents in all countries which grant protection to inventors. The large majority of U. S. and foreign patents issued to inventors on the Pacific Coast have been obtained through our agency. We can give the best and most reliable advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free.

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220 Market St., San Francisco.

GEORGE H. STRONG, Manager.

## Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

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F. H. BURKE, 626 Market St., S. F. All Prize Horses; Grade Milch Cows. Fine Pigs.

BULLS—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times, either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

JERSEYS—The best A. J. C. C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale.

P. H. MURPHY, Perkins, Sac. Co., Cal. Breeder of Shorthorn Cattle, Poland-China & Berkshire Hogs.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

PETER SANE & SON, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

JERSEYS and HOLSTEINS, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. William Niles & Co., Los Angeles, Cal. Breeders and Exporters. Established in 1876.

## Poultry.

J. W. FORGEUS, Santa Cruz, Cal., has the best stocked and equipped poultry ranch on the Pacific coast, and makes a specialty of Barred P. Rocks, Brown Leghorns, Black Minorcas, Pekin Ducks. Seventy acres to Leghorns, six acres to Minorcas, and my home ranch to Barred P. Rocks and Pekin Ducks. I guarantee satisfaction in every order. Exhibition birds and breeding stock. Eggs for sale. Reference, People's Bank.

BUFF LEGHORNS. Thoroughbred young Stock for sale. Eggs, \$1.50 and \$3 per 13. C. W. Hansen, San Mateo, Cal.

WELLINGTON'S IMPROVED EGG FOOD for poultry. Every grocer and merchant keeps it.

BROWN LEGHORNS a specialty. Stock for sale. Eggs, \$1.50 and \$3 per 13. Reduction on incubator lots. Matthias & Blom, Sacramento, Cal. Box 149.

A. BISCHKE, Tracy, Cal., breeder of thoroughbred White Leghorns, B. P. Rocks, Pekin Ducks. Eggs, \$1.50 per 13.

WILLIAM NILES & CO., Los Angeles, Cal. Nearly all varieties of Poultry, Dairy Cattle and Hogs.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for illustrated and descriptive catalogue, free.

R. G. HEAD, Napa, Cal., breeds all kinds pure bred fowls: 100 choice birds to select from.

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R. H. CRANE, Petaluma, Cal. Breeder & Importer. Southdown Sheep, also Fox Hounds from Missouri.

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REGISTERED Poland-China Hogs for sale. Cornwin Tecumseh strain. Sulphur Spring Farm, Niles.

M. MILLER, Elsie, Cal. Registered Berkshires.

J. P. ASHLEY, Linden, San Joaquin Co., Cal. Breeds Poland-China, Essex and Yorkshire Swine.

BERKSHIRES and POLAND-CHINA HOGS, Best Stock; also Dairy Strains of Jerseys and Holsteins. Wm. Niles & Co., Los Angeles. Est. 1876.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.

## Little's Chemical Fluid Non-Poisonous SHEEP DIP.



Beware of Cheap Imitations. One gallon, mixed with 60 gallons of cold water, will dip thoroughly 180 sheep at a cost of one cent each. Easily applied; a nourisher of wool; a certain cure for scab. Little's Dip is put up in red iron drums, containing 5 English or 64 American gallons, and is sold to the trade by the English gallon. For the convenience of our many customers it is also put up in one-gallon packages, for which we make no extra charge. Each drum and package bears the orange label of "Little's Dip."

CATTON, BELL & CO.,

(Successors to Falkner, Bell & Co.) 406 California St., San Francisco.



## BERKSHIRES.

We received many compliments for our herd from visitors at the State Fair. We competed for 13 ribbons and won 11, as follows: 2 special; 2 sweepstakes; 3 firsts; 4 seconds.

We have a few Choice Pigs for sale.

SESSIONS & CO.,

P. O. Box 686.

Los Angeles, Cal.



Feed our Poultry Food, and you will have healthy chickens and lots of eggs. Ask your dealer for it.

Genuine only with RED BALL brand. Recommended by Goldsmith, Marvin, Gamble, Wells, Fargo & Co., etc., etc. It keeps Horses and Cattle healthy. For milk cows; it increases and enriches their milk. Manhattan Food Co., San Mateo, Cal.

## In These Dull Times

You Can Largely Increase



Your income by buying an Incubator and engaging in the chicken business. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember the Best is the Cheapest. PACIFIC INCUBATOR CO., 1317 Castro St., Oakland, Cal.



## THE HALSTED &amp; INCUBATOR COMPANY,

1312 Myrtle Street, Oakland, Cal.

Send Stamp for Circular.

JUBILEE, JUBILEE, JUBILEE. The late improvements on the Jubilee Hatcher make it head the list. It is a perfect self-regulating hot water machine, with copper boilers and an entirely new system of operation. The sizes made now are 100, 200, 300 and 500-egg capacity. For sale by H. F. WHITMAN, Agent, 2045 Alameda Ave., Alameda, Cal. Send for circular.

## FRANK A. BRUSH,

SANTA ROSA, CAL. (Care Santa Rosa National Bank.) Importer, Breeder, Exporter.



S. C. White Leghorns, S. C. Brown Leghorns, Barred Plymouth Rocks, Black Minorcas.

Eggs, \$3 per 13.

Send for Circular.

## CATALOGUE FREE. SEND FOR IT.



## EGGS FOR HATCHING,

In large or small lots, from Barred Plymouth Rock, S. C. Brown Leghorn and Black Minorcas, at 50c per doz. MRS. J. G. FREDERICKS, Madison, Cal.

## SAMPLE American Bee Journal.

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Weekly, 32 pages. \$1 a year.

160-page Bee-Book Free!

All about Bees and Honey

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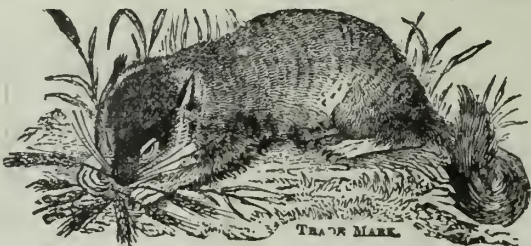
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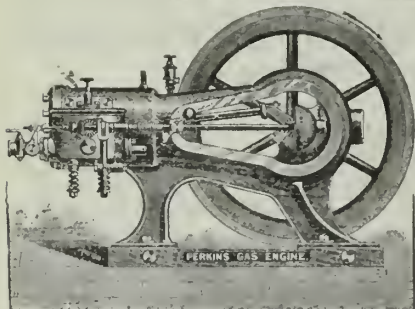
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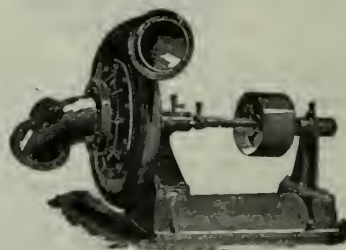
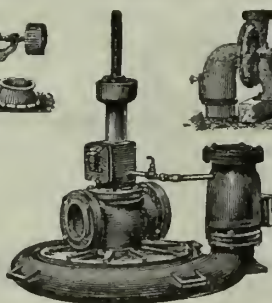
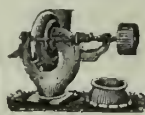
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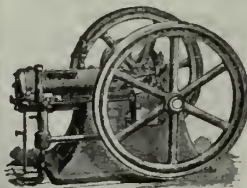
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 7.

SAN FRANCISCO, SATURDAY, FEBRUARY 16, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

### Arboreal Spectres.

From the earliest written words the forest has furnished a symbolry for the various stages of human existence and for the various attributes thereof. The pliancy of youth, the exuberant strength of perfect maturity, the decay of age—all these and their innumerable accompaniments have suggested parallels between man and the tree. The greatest poets and the barbarous denizens of the untracked forest have risen together to the same height of imagery and the same tokens of emotion and sentiment. Evidently the tree appeals directly to the mind of man and conveys a lesson which needs no interpretation by culture or erudition.

The marks of age and approaching dissolution in the tree and in the man have perhaps been most widely noted. "I am like an old fir tree—dead at the top," said a decrepit chief of the Oneidas as he conversed with the pale face and showed his silvery locks. Hale old age has been brought to look upon the old monarch of the forest in these words: "His own bald head and grizzled locks—his own top with its decaying foliage—will make him feel a secret sympathy for some grizzled giant of the forest, old and decaying, but still strong and self-reliant."

Our engravings on this page suggest such thoughts as these. We have shown many trees in their prime and in their youth, but few in their old age and in the spectral form which some trees assume after the sap has ceased to flow and foliage no longer shields their stems from the bleaching sun. A dying *sequoia gigantea* is one of the themes of our engraver this week. It has reached its massive growth and its stature can be estimated by the pigmy-like men at its base. Death and decay have stricken it sorely. Storms have wrested from their places many of its spreading arms, and yet from the dying stumps there come a few foliage-bearing boughs to betoken its possession of life, even though strength and vigor have departed. Its majesty, even in death, over the fullgrown and vigorous pines which surround it is but a symbol that some men, even in their death, are greater than the most vigorous humanity which bustles about during their declining years. Such have been some of the world's heroes—those in whom noble purpose has led to lofty thoughts and peerless deeds.

But there is a step beyond the symbolry of real life in the forest. The mystic and appalling are there as well, and how amid active life the spectre stands both among men and among trees. Could there be a more forcible reminder of this fact than the ghostly form of a cypress of other days, which the engraving shows beside a roadway on Cypress point, in Monterey county? Very impressive are these bleached skeletons of the cypress. Gnarled and bent are they in old age, after a century perhaps of endurance of the ocean blasts upon a bleak promontory, but the strength gained by such knitting of fibers during decades of resistance



AN AGED SEQUOIA IN A PINE FOREST.



THE GHOST OF THE FOREST ON CYPRESS POINT.

and buffeted by winds, leading a spectral existence when the remains of other trees have silently sunken to rest and are indistinguishable in substance from the soil from which they sprang.

### Another Freeze in Florida.

Poor Florida has been swept again by a blizzard which should have taken a more northerly course, and the temperature fell again to 12° with ice two inches thick. This is at least 12° lower than semi-tropical fruits should be called upon to endure, and losses amounting to ruin of certain interests is telegraphed. The reports say: "The damage to the vegetable crop, pineapples, strawberries and to orange and lemon trees is inestimable. By some the loss is set at \$15,000,000. It is said by experts that orange trees are more hurt than in December; on account of the sap having, in the southern parts of the State, started to run freely. James Harris of Ocala, who is the best-informed orange grower in Florida, estimates the orange crop of 1895-96 at only 100,000 boxes. The average crop for the past three years has been 5,000,000. It will be practically impossible immediately to replace the trees killed, as the nursery stock is all destroyed."

With all the injury to citrus trees, pineapples and other fruits, it is estimated that the frost on February 7th and 8th has occasioned as much or more losses than that of December. The area of low temperature extended as far south as before, and vegetation was not in as strong a condition to stand the cold as in December. To recoup the losses of the orange crop many orange planters planted vegetables. They had started a vigorous growth, and were developing to a point where they could be most damaged by severe cold. Then came the second freeze. It appears now that the vegetable crop of Florida is an entire loss.

It is hard to estimate the effects of this year's disasters upon Florida. It is foreseen that the industrial course of the State will be considerably changed. It seems to be conceded that the great fruit interests carried on a speculative basis by non-resident owners will be allowed to lapse. The close prices and low returns for the last few years, followed by the loss of the plant and the money it cost, will, it is thought, cause investors to allow the enterprise to go by the board. Our contemporaries are urging the building up of the State upon an independent basis of self-support—that is, Florida for resident Floridians on a hog and hominy basis. It may not be so flowery a progress, but it may be safer and more satisfactory.

DURING the past week two carloads of apples have been shipped from San Jose to London, England. They went by rail to New York, and go thence on the American line. The total dried-fruit shipment East for the week was over 1,400,000 pounds.



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ALFRED HOLMAN.....Editor.  
E. J. WICKSON.....Special Contributor.

San Francisco, February 16, 1895.

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## The Week.

**The Frost in Florida.** We have alluded in another page to some of the deplorable features of the two terrific freezes which

have brought ruin to tender growths in Florida. The figures of present and prospective losses are appalling. To the plant lover, however, there are items of experience which give a deeper realization of the disaster than figures of pecuniary losses. Before the second disaster, and writing wholly of the freeze of the last week in December, a correspondent of the Florida *Agriculturist* writes:

Our beautiful tropical fruit orchards are a deplorable sight, and with them goes the joys of a summer. It will be awful this summer without any fruit at all. I had lived largely on the hope of the greatest mango crop of my life for this summer and was already sending out invitations to my friends to come and camp under my trees. I had several trees, one of which would have fed a regiment of soldiers for a season. These had a spread of nearly thirty feet, were twenty feet high and as large as a half barrel at the ground, and would have borne from ten to fifteen thousand mangoes a crop; they are gone! The Avocado pears went with them. I did not weep, but I felt like the "bottom was out." I shall now put in like fighting fire to try and make vegetables, melons and all manner of truck to replace them and to keep me so busy that I will not have time to get the "blues."

But he has the "blues" now. The freeze of last week probably destroyed the whole area of early vegetables which he planted with such energy and hopefulness. Such disaster can only evoke the most genuine sympathy and thankfulness for the grand mountain barriers which so effectually shield California from arctic visitations.

**Flower Vending.** We notice that the city florists have formed an association the announced objects of which are to

"kill Chinese competition and prevent the vending of flowers on the streets." We are aware that the business of growing plants and flowers has been of late much embarrassed by the vast production by Asiatics, which is available for retail at very low rates, and we have heard that those who pay rent for stores feel much aggrieved over the rent-free vending of flowers on the streets. We do not presume to question the business necessity which may exist that white people who desire to live as Americans shall contrive some way to protect their interests from ruin through competitors who are wholly un-American in life and aspiration. We can, however, but regret that the trade in high-grade flowers in well-appointed establishments should be obliged to strive against the sale of cheap flowers on the streets. Certainly the present prices and the present style of vending bring lovely flowers into the hands and homes of those who would never in the world enter the doors of a florist's. These buyers could not afford the price of protected flowers, nor would they seek them behind plate-glass windows. We wish some way could be found to stimulate the higher trade without ruining the lower. The vicinity of the Lotta Fountain is to us one of the most inter-

esting spots in the city. It indicates to the visitor how grand are our floral resources, and it gives to the resident a glimpse of loveliness which would be otherwise wholly denied him. The ordinary florist seems to have hard lines nowadays. He complains both of competitors who have too much capital and those who do not need any. It is a peculiar industrial condition.

## State Exchange Matters.

At a meeting of the directors of the re-organized State Fruit Exchange last week Mr. B. F. Walton was elected president. Mr. Edward F. Adams, who from the beginning has been the manager of the Exchange, insisted that his resignation—which was tendered long ago—should be accepted, and it was so ordered. Mr. Adams has given admirable service to the work, and only leaves it to look after his personal interests, which, he says, have been too long neglected. He promises, however, to give to the cause such time as he can spare to it, at least until such time as it shall be entirely on its feet.

In accordance with the request of the late convention, President Walton has appointed Edward F. Adams of Santa Cruz county, W. F. Rowell of Fresno county and J. M. Bassford of Solano county a committee to obtain legislation looking to the relief of stockholders in co-operative societies from any liability on stock in such enterprises, beyond the par value of stock owned by them. Messrs. Rowell and Bassford, being members of the Legislature, can conveniently attend to the duty after getting from the experience of Mr. Adams the facts and reasons upon which the request is based. Mr. Adams went to Sacramento on Wednesday to confer with the other members of the committee. It is understood that a constitutional amendment is necessary to secure this relief.

## State Board of Trade.

On Tuesday of this week the State Board of Trade held a very interesting meeting and gave hearing to parties who have progressive measures to urge and experience to relate. Mrs. H. W. Strong of Los Angeles county, who has done so much of late to forward the pampas plum business, made statements showing the present status of a line of production which is not talked about so much as it was a decade ago. Mrs. Strong said that the plumes are generally valued at from \$30 to \$40 a thousand, and from the grass growing on either side of the avenue on her property, 800 feet in length, she had realized from \$3000 to \$4000 per annum. This year Mrs. Strong said she had 100,000 plumes, for which she had been offered only \$15 a thousand, owing to overproduction and the financial depression. She had, however, refused this price, believing she could do better. Speaking on the subject of overproduction of the plumes, she said that while from 10,000 to 15,000 were sufficient to glut the New York market, 8,000,000 were annually employed at London, where the people had learned of their varied uses in decoration. This looks as though the southern California plum interest might possibly experience a revival, unless the London supply could be furnished by the country around the Mediterranean.

## Cloverdale Citrus Fair.

Cloverdale, in Sonoma county, is doing what many another progressive region could do for its own advancement, which is to maintain an annual display in midwinter of citrus fruits and other desirable productions which are in condition at the time. In no better way can California localities so well maintain their claim of mild winter climate; and, at the same time, the fairs are as delightful socially and as instructive from an educational point of view as good neighborhood fairs always are. The Cloverdale Citrus Association has for its president Col. J. B. Armstrong, whom RURAL readers know well for his public spiritedness and philanthropy. The Colonel is prevented by illness from active work for the enterprise, but still advances its interests in every way. At the fair last week an address was delivered by E. W. Davis, of Santa Rosa, which was well received. The attendance at the fair from long distances shows how wide reaching such efforts often are. The following awards were made in the fruit classes: Best assorted oranges, Italian-Swiss colony; best navel oranges, M. Menihan; second best navel oranges, J. N. Atherton; most artistic display of navel oranges, John Field; best lemons, J. C. Holloway; most artistic display of lemons, H. J. Crocker; best twelve navel oranges, Miss Lizzie Hall; second best twelve navel oranges, T. J. Cottle; best twelve Mediterranean Sweets, J. A. Chalfant; best twelve Malta Bloods, H. P. Belford; best twelve Seedlings, W. T. Brush; most artistic display of assorted oranges, F. Yordi. Best olives, Italian-Swiss colony; most artistic display of olives, Parker Vineyard Company; best citron, Mrs. C. Worth; best dried fruit, M. K. Truett; most artistic display of dried fruits, Cooley Brothers; best canned fruits, H. P. Belford.

## The Great Wheat Problem.

We shall begin publishing in the next issue of the PACIFIC RURAL PRESS the most notable exposition of the great problem of wheat growing in California that has ever been attempted. We have had from time to time isolated statements of individual experience in the wheat field and wheat market, and we have had learned and elaborate "reviews of the situation" by those skilled in commerce and finance. What we shall offer our readers during the coming weeks will be carefully prepared original statements from wheat growers in twenty-six California counties as to the following essential facts:

- a—The actual cost of wheat.
- b—The value of land on which it is grown.
- c—The per-acre yield which would yield a profit.
- d—The proportion of land in each county which now yields that amount.
- e—The use of wheat in feeding animals.
- f—Other uses of wheat which will pay.
- g—Deductions from preceding facts.

Evidently a better idea of the actual truth involved in all the above propositions will be of incalculable service to wheat growers and the State at large just at this critical time in our agriculture. Those who have greatest respect for the opinions of men who are practically engaged in work they write about will be delighted with what the RURAL PRESS has for them on this subject. The statements are from men who grow wheat—men who are, so to speak, right down in the stubble and speak from the parching heat of recent experience. Who these men are and how important their counties are in the wheat product can be seen from the following list of counties and those who write from each of them:

TEHAMA: Frank Houghton, Corning.  
BUTTE: W. W. Durham, Durham; E. T. Reynolds, Chico; Garrett Koppel, Gridley.  
YUBA: Hugh Morrison, Wheatland.  
PLACER: E. J. Sparks, Lincoln; Peter Ahart, Lincoln; E. C. Rogers, Sheridan.  
AMADOR: J. A. Godding, La Plana.  
SETTER: George Ohleyer, Yuba City; H. Luther, Live Oak.  
COLUSA: C. P. Wilson, Grimes; Peter Peterson, Sites; James Deveney, St. Johns; J. H. Langenour, College City.  
GLENN: P. H. Carnett, Willows; F. M. Luttis, Willows.  
SOLANO: R. J. Currey, Dixon; E. C. Dozier, Rio Vista; J. B. Hoyt, Bird's Landing.  
MENDOCINO: John Mewhinney, Pomo; H. C. Waugh, Talmage; J. Scott Ryder, Potter Valley; John Crawford, Largo; Thomas B. Henly, Covelo.  
SONOMA: E. W. Davis, Santa Rosa; Robert Crane, Santa Rosa.  
NAPA: J. R. L. Hardin, Pope Valley; J. R. Johnson, Monticello.  
ALAMEDA: T. C. Johnson, Pleasanton.  
SACRAMENTO: J. Reith, Union House; Joseph Sims, Union House.  
SAN JOAQUIN: M. T. Noyes, Stockton; J. D. Hoffman, Lodi; E. G. Williamson, Stockton; Arthur Thornton, New Hope.  
STANISLAUS: O. M. Henry, Modesto; L. A. Richards, Grayson; C. N. Whitmore, Ceres; A. L. Cressy, Modesto.  
MERCED: H. C. Wolfson, Merced; John Swan, Livingston; M. C. Burchell, Plainsburg.  
FRESNO: A. A. Weber, Selma; O. H. Easton, Borden.  
TULARE: John Tuohy, Tulare; R. O. Newman, Visalia; James M. McClellan, Hanford; G. A. Heinley, Lemoore; J. W. Davis, Porterville; Robert Doherty, Hanford.  
MONTEREY: John Iverson, Chualar; D. McKinnon, Salinas; Edward Berwick, Monterey; William Pinkerton, Pleyto.  
SAN BENITO: George T. Elliott, Hollister; James T. Gray, Hollister; A. J. Clancey, Hollister; W. H. Best, Hollister; Thomas Flint, Hollister.  
SANTA CRUZ: Ernest Werner, Watsonville; A. P. Rouche, Watsonville.  
SANTA BARBARA: Ellwood Cooper, Santa Barbara; J. W. Torrence, Santa Lucie; J. J. Hobson, Ballard.  
VENTURA: C. E. Hoar, Simi.  
LOS ANGELES: Jacob Swall, Del Sur.  
SAN DIEGO: J. F. Ward, Berendo.

Such is the wide region of California and these the men who will give their experience in growing wheat and their best thought about the situation the wheat grower is in and how best he can be relieved from it. It was the enterprise of the State Board of Agriculture, as directed by its efficient secretary, Edwin F. Smith Esq., to gather these reports, and by this act the Board has rendered the State a great service. In view of the possible delay in printing the report of the society during a legislative year, the RURAL PRESS has been furnished with advance copies of the reports, so that they may be immediately placed before the farmers of California for their information and benefit. We shall begin the publication in our next issue.



From an Independent Standpoint.

Those who oppose the Waymire bill—which provides for a commission to investigate official and other political scandals—are seeking to array rural prejudice against it as a measure local to San Francisco. “If San Francisco wants her political rottenness exposed,” they say, “let her do it herself, under her own authority and at her own expense.” This very specious plea is based upon the utterly false assumption that political dishonesty in San Francisco is the business of San Francisco alone, and that it has no relationship to political or other interests outside the city. If this idea can be made to prevail, and if, through it, the Waymire bill can be defeated, all will be well for the Burnses, the Buckleys, the Rainey and all the rest of the municipal corruptionists, for the “authority” of the city is in their own hands. The plain truth is, and all practical men of affairs know it, that if the Legislature does not provide for exposing the corruptions in San Francisco and for bringing her political criminals to justice, there will be no exposure and no punishment, and things will go on as they have been going these long years past. The Burnses, Buckleys et al. will continue to own the political organization of the city and corruption will continue to run riot.

Readers of the RURAL scarcely need to be told that all this is as fatal to the interests of the country as to the city; that it utterly degrades our State political life, and that it piles up expense which the people have to pay in the form of heavy taxation. We say it need not be told because it has very recently been demonstrated that the city boss is also the country boss. Nobody who takes even a passing interest in public events can have forgotten the insolent domination of Col. Burns at Sacramento last summer—how he forced upon the Republican ticket certain candidates whom the best judgment of the party rejected; with what impudence he “threw down” the rural delegates who sought to maintain a manly independence in the convention. And when it is reflected that the source of his power—that the source of the power of all the bosses who have ruled the politics of California—has been the city “machine,” it does not need a world of common sense to see that it is as much in the interest of the country as of the city that this machine should be destroyed. In truth, the redemption of San Francisco from its “bosses” is the first essential step in the movement for the political emancipation of California.

There are, of course, very large and some (nominally) very respectable interests which do not want to see the existing political scheme broken up in San Francisco. The policy of the large corporations can be served better under a system of corruption than under an honest system; the political ambition of certain very potent men stands in better case with the boss system than under any other; many persons in high places have risen through the boss system and hope to maintain themselves by it; a vast army finds direct profit in it. All these interests are of course combined against the proposition for a commission of inquiry, and no available means of opposition will be too small or too low for their use. It behooves the friends of decent politics, of honest government and of public morality to be very earnest and very watchful.

There died in San Francisco on Monday of this week a man who, in widely different ways, has been a very notable figure in California these thirty years past. Mr. W. W. Stow has been known by his friends and neighbors as a gentleman of exact integrity, of a profound and cultivated mind and of kindly and humane sentiments. His interest in things which make for public utility and for the advancement of public taste has been manifest at all times; and of late very conspicuously in connection with the city pleasure ground of Golden Gate Park. As a member of the Park Commission, his labors have been unremitting, and it was under his direct administration that the more recent improvements have been made. The beautiful lake which girdles Strawberry Hill was his own conception; and his energy made it a reality. Mr. Stow was heedful of many things related to the higher welfare of California; he was charitable to the poor; he was a generous friend and he was very tender in all

the domestic relations of life. This was what may be termed the personal side of Mr. Stow's character. But he had another side—one which it is not so pleasant to contemplate. Mr. Stow's public character for the past twenty-five years has been that of chief political agent of the Pacific railroad companies. What his machinations have been, those who know the political history of the State need not to be told. There are not words in the language to describe the debaucheries of which he is alleged to have been the instrument. They include the whole range of political corruptions, and their effect is manifest in the debasement of our political life—not to mention the further effect upon public morals.

Mr. Stow was clearly one of those abnormal creatures—of whom the late Leland Stanford was a pre-eminent example—devoid of moral sensibilities excepting in purely personal relationships. As Mr. Stanford could complacently endow a great public benefaction with money gotten wrongfully, so Mr. Stow could turn from schemes of the grossest sort to exercise his genius for organization, his refined tastes and the better part of his nature in works of public usefulness and in charity. Such men are a most mischievous element in human society. Ability, taste, culture, personal charm—these qualities in a man essentially bad only add to his capacity for mischief. It is infinitely better that the wolves of society should keep to their own character and not so mix good with evil that the one may—like a sweet varnish upon a nauseous poison—gain acceptance for the other. It is hard to say these things; it is harder still that they need to be said; it is ten thousand pities that men of capacity for virtuous life, and endowed with the forces for worthy success, should so live that when we stand at their graves it may not be said: Well done.

There are no new developments in connection with the projected San Joaquin Valley railroad. The subscription is now considerably in excess of the required two millions, and it is still growing steadily. Mr. Spreckels insists that it shall be made six millions, and has offered to double his own subscription when by so doing the sum will reach this figure. Interest now centers in the route to be followed. San Jose wants the road to come through the Santa Clara valley and to cross into the San Joaquin farther south; and intimates that to secure the adoption of this route a very handsome subscription will be made to the capital stock. This scheme would make the terminus on the San Francisco peninsula, leaving out Oakland and the lower end of the San Joaquin valley. Stockton is much exercised over the matter and proposes by liberal subscription to the project to have a say in arranging the route. Oakland is expected to pursue the same policy. The result, possibly, will be the construction of a road with two approaches to the city, one via Stockton and Oakland and the other through the Santa Clara valley and up the peninsula. The feeling grows, though upon what basis we cannot learn, that Mr. Spreckels knows more than he is willing to tell and that he is, in fact, working in conjunction with the Santa Fe people whose road now reaches the southern part of the State. This assumption adds, of course, to the popularity of the project. If there be, in fact, an understanding between Spreckels and the Santa Fe, it means not only a local line through the San Joaquin valley, but an immediate Eastern connection. Such a connection is bound to be made sooner or later. As yet, the Valley road has not been incorporated, but attorneys are at work preparing the papers and it will not be a great while before operations will be actually under way.

It is reported from New York that a daughter of the late Jay Gould is about to become the wife of a titled European, named De Castellane, and that one of the considerations of the marriage is the settlement of \$2,000,000 upon the prospective bridegroom. We pass over the vulgarity of this bargain, which does not concern the public, to a feature of it which does very much concern the public. It is this: The money to be paid to De Castellane, and which will go, of course, like all such payments, in vices and debaucheries, is American money, got by American toil. It has been permitted to become the property

of a young woman who never lifted a hand in productive industry, under a system based upon theories of public advantage. Her use of it is a public injury, an act of violence to American ideas, a degradation of national character, an affront to our national self-respect. This is only one of many similar cases. Untold millions of American money have been and are being similarly misused. The agents of this shameful business are usually silly women, but in Mr. Astor there is a conspicuous example of a man of brains and experience being led by the same baubles into an almost equal misuse of American wealth. As things are, there is no help for it; but is it expedient that things should remain as they are? This is a question which the American people would do well to think over.

Rainfall and Temperature.

The following data for the week ending 5 A. M., February 13, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week. | Total Seasonal Rain-fall to Date. | Total Seasonal Rain-fall Last Year to Same Date. | Average Seasonal Rain-fall to Date. | Maximum Temperature for the Week. | Minimum Temperature for the Week. |
|----------------------|------------------------------|-----------------------------------|--------------------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|
| Eureka .....         | 2.70                         | 31.43                             | 38.46                                            | 24.98                               | 56                                | 40                                |
| Red Bluff .....      | 2.04                         | 24.31                             | 15.61                                            | 17.39                               | 64                                | 36                                |
| Sacramento .....     | 1.50                         | 21.20                             | 10.11                                            | 13.02                               | 64                                | 40                                |
| San Francisco .....  | 2.03                         | 21.69                             | 13.65                                            | 16.14                               | 60                                | 44                                |
| Fresno .....         | 1.56                         | 11.18                             | 4.99                                             | 7.50                                | 62                                | 36                                |
| Los Angeles .....    | .40                          | 11.62                             | 5.82                                             | 13.01                               | 58                                | 38                                |
| San Diego .....      | .50                          | 10.14                             | 3.41                                             | 6.59                                | 60                                | 38                                |
| Yuma .....           | 0                            | 2.99                              | 1.42                                             | 2.43                                | 76                                | 40                                |

Gleanings.

THE Oroville Register advocates a meeting of farmers to discuss the grain situation.

THE acreage to be sown to beets this season at Anaheim will be between 2500 and 3000. The Chino acreage will be about 6000.

THE Colusa Sun says that Shasta water retails in San Francisco at higher rates than California wine—and remarks that it is the only instance in the world where the gushing waters of a mountain spring is worth more than the pure juice of the grape.

TULARE Register: The great area going into alfalfa this year means that Tulare county is to become an important stock center, or it means that thousands of acres of alfalfa will be ripped up after a year or two to give room to something else. It is not likely that the demand for hay and pasturage will make all this area possible. Alfalfa growers will need to get stock of their own.

THE Watsonville Rustler reports that A. W. Tait of Corralitos has received an order for fifteen boxes of apples, to be shipped to Siberia. The fruit will be packed in plaster of paris and shipped in barrels hermetically sealed. As the freight charges on the apples from San Francisco to Siberia will be \$7.50 per box, the fruit will be an expensive luxury when it reaches its destination.

OROVILLE Register: W. E. Gillespie says that he returned last summer with a span of horses that were poor in flesh. He turned them out where they could pick up black figs as they fell from the trees, and in less than a month the animals were as fat as they could roll. He hauled wood, two trips a day, during this time, yet in spite of hard work and nearly twenty miles of travel each day the animals gained rapidly in flesh. Geo. Thatcher says every animal loves the black figs. Cows and hogs fatten quickly upon them and even dogs will eat them. Dr. Parker fattened some hogs upon these figs and the meat was remarkably white and sweet.

Grafton letter in Woodland Democrat: We read and hear a great deal about small farms, and the benefit they are to a community. I don't profess to know anything about it, but this section of the county is not making any great strides in subdivision. A few years ago we had the Reed ranch, the St. Louis ranch, the Anderson ranch, the Hamilton ranch, and now it is all known as the Fair ranch. Levi Adams is now farming the McClintic and Hoffman ranches, besides his own. James Baird is farming the Frierson and Barney ranches as well as his home place. Asa Morris has also several ranches under control, and many other ranchers are doing the same. In fact, it is the only way that a man can clear expenses. But very little more stock and machinery are required to run these ranches than one, and the expense has to be met just the same. A rancher of 160 acres has to keep a lot of stock and machinery on the expectancy of a crop worth twelve hundred dollars, which will probably turn out after north winds, too much or not enough rain, to be worth nearer two hundred and fifty dollars. If you doubt me ask any hundred-and-sixty-acre grain rancher, and he will probably be more explicit. If fruit raising is more profitable, it surely will be sought after. Now, what troubles me is, how did the rancher of 160 and 320 acres make money when expenses were greater and the wind blew and the rain rained very much the same as it does now-days, and it is all the big rancher can do now, with all his improvements and facilities, to make a living?



## HORTICULTURE.

## California Seedling Fruits.

By PROF. E. J. WICKSON of the State University at the recent meeting of the American Pomological Society.

Seedling fruits have been an important factor in the pomology of the Pacific coast from the earliest times. The pioneer pomologists were the Mission Fathers, who began their work upon the peninsula of Lower California in 1697 and extended it to the territory now known as California in 1769. To what extent these missionaries depended upon selection from seedlings to develop the fruit varieties which became characteristic of their establishments in this State, or how far these varieties are due to the introduction of cuttings from approved varieties of two centuries ago in Spain, may never be definitely known. The Mission olive and the Mission grape have been tentatively identified with European varieties, to which they do possess at least a strong resemblance.

Both these fruits are certainly very far removed from the wild types, and both are fruits most readily grown from cuttings. The same is true of the Mission fig. If it be granted that they did not originate these fruits from seed, it must also be conceded as most probable that the other fruits of the Mission, the oranges, limes, citrons, pomegranates, dates, apples, pears, peaches and plums were seedlings.

The inferiority of these fruits is in marked contrast to the excellence of the Mission olive, grape and fig, and this might be taken to indicate that the fathers were more expert at improving Indians than they were at improving fruits, or else they would have given us varieties of other fruits possessed of as distinctive excellence as must be granted to their olive, grape and fig. Must we then decide that the earliest growers of seedling fruits on the coast did not improve their opportunities?

About a century later than the first seed planting in Lower California, there was an introduction of seed from the northeast and the northwest. The trappers and agents of the Hudson Bay Company started fruit trees from seed in western Oregon, and the Russians on the coast of northern California. These early comers seem to have been content with whatever came from their seed, and, possibly, with the exception of a single apple, which can be traced to the Russian settlement, they left no pomological legacy to the present race of fruit growers.

*Seedling Fruit by Americans.*—With the advent of Americans came not only fruit seeds but enterprise and ambition directed by pomological love and lore, and for the last fifty years the fruit growers of California and Oregon have done more in the origination of new varieties from seed than the same number of people anywhere else in the world. Of course only a small part of those which have won notice and praise have attained commercial importance, and yet enough have passed this test to make California fruit lists largely unintelligible to Eastern or European pomologists. I believe it is no exaggeration to claim that one-third, and possibly even more, of the deciduous fruits and nuts which we grow for export are of varieties originated here, and unknown to distant orchards or to distant literature. The fact that these varieties are peculiarly suited to our local conditions may somewhat limit their industrial importance to the world at large, but does not at all reduce their value to pomological science.

Nor does the other fact that their origin is due to the necessity, which was very early discerned, that our peculiar conditions required new varieties adapted to those conditions, lessen their pomological significance. It rather affords unique evidence that pomology is a science and not merely an arrangement of empirical formulas and rules. It gives the pursuit of pomology new dignity also as an art because it endows it with creative functions.

It is gratifying to us as Californians to be able to claim, upon the basis of such achievements as I have hinted at, some true affiliation with our distinguished guests, whose reputation is already established in honors for which we are pleading.

*Possible Parentage of Our Seedlings.*—It would be an exceedingly interesting study to trace out the introduction of the best varieties of fruits, from all the quarters of the earth and to show that in our seedling fruits, as in our native sons and daughters of the Golden West, there is the choicest blood which flows from all enlightened sources. It would be too great a task for such an occasion as this. It may, however, be conceded that for nearly half a century the earth has been ransacked for pomological treasures to bring to California. These trees and vines have bloomed, the winds have blown, insects have come and gone, and though probably not one variety in a hundred of those brought to California can now be found in our commercial orchards, who can say that any one of them has not, during its probation here, given some attribute of its being to some seedling which comes to us with new form and qualities thought to be original?

California is disposed then to allude to her achievements in the line of new fruits with due humility. She really knows not what triumph of pomologists

long gone to their reward have joined, upon California soil and under California skies, to bring forth the present masterpieces she calls her own.

While there have been a number of new fruits originated in California by the most scientific method of cross-pollination from selected parentage, and while the achievements of Luther Burbank of Santa Rosa in this line are perhaps as creditable as any originator in the world can claim, it must be acknowledged that thus far California has accomplished most by the humble and elementary method of recognition of merit in chance seedlings.

In early American days fruit seeds came in luggage of hundreds of gold seekers. Those who went out from the old Eastern homes to seek fortunes in our gold fields very often brought seed from the grand old fruit trees around which the memories of childhood lovingly clustered. Those who, in haste of starting, or thinking that they were going to a barren land, neglected fruit seeds, asked for them in their first letters to the old homes. The result of this general introduction of seeds from varieties most esteemed in the old homes, was the gift to the welcoming California soil of large quantities of seed of the choicest parentage. Thus among the trees that sprang up everywhere in the mining regions of the foothills, and in the earliest settled valleys as well, there have been found many excellent seedlings, some of which are now among our most popular local varieties.

*Early Recourse to Seedlings.*—Again, there was a wide planting of seeds at the first because budded trees were either not to be had or were held at prices which nowadays seem almost fabulous. Certainly forty years ago common budded trees were sold in the city where we now meet at a price for which you could obtain upwards of a hundred trees of the same variety to-day. Fruit seeds were proportionately high and in as great request in those days.

Early planters have paid in this city 75 cents and \$1 per pound for peaches, chiefly to secure the pits; they have patrolled the streets to pick up the pits which were dropped by other fruit buyers. It is a unique item in our pomological history that people among whom gold nuggets were treated as carelessly as nickels are to-day, should delight to rake the dust of the streets to discover peach pits or should hoard up the seeds of apple or pear until they could intrust them to the soil beside their cabins. And this early pomological fervor was richly rewarded; the trees attained growth and came into bearing with a rapidity and profusion almost incredible to those who came from less genial climates.

Though the planting of fruit seeds never wholly stopped, it was a matter of minor concern as soon as budded fruit became cheap and plentiful. From 1855 to 1875 incentive to growth of seedlings ceased, except with those who loved pomology for its own sake and never lost its inspiration to improvement.

*The Present Era of Seedlings.*—With the uprising of fruit growing as a great commercial industry about 1875 a new incentive was given, and it was one of quite as engrossing a nature as that of pioneer times. Fruit for shipping long distances, fruit fit to endure the trial of the canning process, varieties which would resist the attacks of parasites and diseases, varieties which would extend the fruit season at both ends by beginning earlier and ending later, all these and other similar considerations developed a discriminating demand for varieties with definite traits and qualities—a demand which we had never known before.

It has remained a ruling factor in our development of new varieties ever since that time, and it will remain with us. Of late it has taken the higher form of cross-pollination from selected parentage of specific type, but probably we shall always glean from the field of chance seedlings which has hitherto yielded such a rich harvest.

It would carry me beyond all proper limits of this paper to submit to you a list with detailed descriptions of seedlings which have become of importance to us. Such account, too, can be found in our local pomological literature. It would better serve our present purpose to remark briefly upon each of the leading kinds of fruits and note some things we have gained by new varieties.

*Apricots.*—In apricots we have secured new sorts which open the season two or three weeks earlier than the ripening of those European varieties which are generally trustworthy here. Some of the earliest European varieties are too small for commercial purposes, or else they are so shy in bearing as to be unprofitable. The greatest apricot in the State is the Royal, supposed to be from France.

We have seedlings which are shipped to Eastern markets from our early fruit regions almost a month before the Royal is ready. The Moorpark is our grandest apricot, when it consents to bear a crop. We have seedlings which combine much of the glory of the Moorpark with surer bearing, more even ripening, and we have also good seedlings considerably later than the Moorpark.

*Cherries.*—The cherry has always occupied rather a limited area in California, though the product is important and of considerable value. Recent ex-

perience shows better success in shipment of cherries for long distances, though there is little warrant at present in commercial planting of the fruit.

Several important varieties have been developed from seedlings in Oregon and in this State, which, like the Centennial and Black Republican, have exceptionally good shipping qualities, and are supplanting old varieties for this purpose. Extra earliness, extreme size and other excellence is always shown by other seedlings, but they have never become very prominent because of the general limitations which beset the cherry in California.

*Apples and Pears.*—In apples we are mainly upon standard varieties, some of which are far more prominent here than in the places where they originated. We have several fall and winter apples of our own, however, which have secured a permanent place in our orchards, such as Skinner's, Marshall's and Cook's seedlings.

In pears our commercial ambition has been rather narrow, and has been chiefly to obtain something which would pass for either Bartlett or Winter Nelis, and thus prolong the market season of these varieties, or escape some of the evils they are subject to in some parts of the State.

Our most prominent seedling pear is P. Barry, originated by the late B. S. Fox of San Jose, and honored with a medal by your society some years ago. We also have other seedling pears which have attained some popularity.

Recently our list of pears commercially profitable has been extending, and the outlook is that we shall grow this grand fruit more intelligently and discriminately than we have hitherto.

*Plums and Prunes.*—Our chief prime product is made from French varieties which seem to leave little to be desired unless we can get drying qualities associated with greater size. A constant effort has been made in this direction in this State and Oregon, and I regret to say that some very large seedlings are being offered to prune planters which will be disappointing, because they do not contain sugar enough to yield a sweet, dried prune of the French type which now seems desirable.

If the American people want a large, acid prune these varieties may afford it, but the curer will probably have to trust to quick, high heat in his evaporator to check fermentation during curing.

I apprehend that these large, thin-jointed plums will need more energetic treatment than even the glorious sunshine of California can afford them.

On the other hand, in shipping and canning plums we have accomplished great things by seedlings. We have originated varieties even earlier than the cherry plum or myrobolan of far greater size and splendid shipping qualities. We also have, through Mr. Burbank, crossbred Japanese plums of decidedly novel features in form, color and flavor.

We have, too, seedlings from European parentage which surpass their progenitors in size, keeping and shipping qualities. With these we are growing a large line of old varieties, and can market plums from the trees all during the season from May to November. Some of our new plums of Japanese origin can be safely shipped without refrigeration, so pronounced are their shipping qualities.

*Peaches.*—Californians have done more in originating new peaches than in varieties of any other fruit. The peach has always been our leading deciduous fruit, though it is now closely pressed, if not surpassed, by the plum family, which, of course, includes prunes. Our origination of new peaches first obtained the notice of your society, if I am not mistaken, and Briggs' Red May is a memorial of one of our greatest pioneers in fruit growing.

It would require an elaborate essay and much study to do anything like justice to the character and values of our new peaches. In different periods of our advancement selection of seedlings has proceeded upon different standards of excellence which seemed at the time of special importance. In pursuit of these ends we have extended our peach season at both ends, so that it now runs from Decoration Day to Thanksgiving. We escaped eurl-leaf both by new and selection of old varieties, long before the discovery of the efficacy of fungicides, which now make the achievement less important. We have peaches wholly free from red color in the flesh or skin, so that the canners can have clear juice, and we have others deep red at the pit for the peach driers. We have clings which, for size and for various commercial purposes, surpass the old varieties and have largely replaced them in our planting. For peach drying, too, we have trained the trees to be sparing of the juice, so we would have less water to evaporate. For general roundness of form, absence of unsymmetrical projections and smallness of pit, we have made many good marks in our work with peaches.

*Almonds and Walnuts.*—In no branch of this effort for improved varieties has our success been more marked than in the development of seedling almonds. The achievements of A. T. Hatch in this line are too well known to require but a passing allusion. It is not too much to say that this work rescued almond culture to California.

When he began, the almond, because of almost



universal failure of old varieties, was a hissing and a byword in our horticulture. Nine-tenths of all the almonds planted during the preceding twenty-five years had gone for firewood or were carrying the foliage of the prune to conceal their hated stems. At the present time, through the dissemination of Mr. Hatch's varieties, the almond, in all regions decently adapted to the tree, is productive and profitable and has a future.

Of the superiority of these new varieties over the leading imported sorts, very carefully prepared statements of comparative weighings of kernel and shell have recently been published by our State Horticultural Society, and are obtainable by all who have been interested in the subject.

The California production of the English walnut is at present largely composed of selected seedlings of local origin, whose history and characteristics are on record. There is now a question whether these varieties are as good as the French varieties, which sell at higher rates in New York.

Certainly our seedlings, so far brought forward, have a rather narrow geographical adaptation, and to the greater area of the State the French varieties seem better. The determination of this question is one of the duties of the immediate future.

*Small Fruits.*—In small fruits we have done less than in orchard varieties. The achievements of Europe and the East during many centuries with the *vinifera* species of the grape have produced all the variation that could be asked for, and all our time has been occupied in determining the local values of these sorts which are perfectly adapted to our climate.

The great progress in the development of new grapes from the species of the regions east of the Rocky mountains has only a general interest for us. The local demand for such grapes is insignificant. All we can claim in this direction is a sport of the Isabella, which, under favorable conditions, attains very great size and retains the old characters of the Isabella.

In berries we have recently attained very striking results. The Logan berry, originated by Judge Logan of Santa Cruz by crossing a sport of our native blackberry upon a common red raspberry, shows most unique characters, account of which has recently been widely published. I have been personally acquainted with the fruit for several years, and its value, at least for the coast region of California, has not been exaggerated. Mr. Burbank has also done some very important work with berries, the details of which are given in his publications.

*The Future.*—As has been already admitted, the most California can claim in the origination of new varieties has been through constant watchfulness for natural sports and chance seedlings. The notable achievements already made in artificial crossing, which have been mentioned, show that we are entering now upon a higher method, and it is fair to expect that the results will be unique and brilliant. We have peerless conditions for scientific cross-fertilization. Our fruit bloom is wonderfully profuse, and the setting of the fruit so sure that one of our greatest orchard expenses is thinning. The perfection of the seed is secured under practical freedom from adverse conditions, and so notably is this the case that California is becoming one of the chief sources of seed supply to the country and beyond. Thus far our pomology has been impelled forward so precipitately by commercial enterprise that we have not had time for leisurely pursuing pomological science. Such a time of quiet work and sublime delight is just now before us. We look upon the first meeting of the American Pomological Society within our borders as fit to mark our admission to a higher degree in pomological work and mystery.

### Another Frost Alarm.

TO THE EDITOR:—Replying to your favor of the 31st ult., I take pleasure in handing you the inclosed circular descriptive of the "frost alarm" which I got out at the time of the date of the circular. I have put in a number of the instruments each winter until this one, when the indications for a wet winter were so good at the outset that there has been no demand for the frost alarm. Those that I have put in are giving good satisfaction, though they are rather "noisy" in the night sometimes.

Riverside, Cal. FRANK A. YEAKLE.

The circular sent by Mr. Yeakle shows that he brought out his "electric frost alarm" in November, 1890. It is described as follows:

The electric frost alarm is an apparatus designed to give an alarm in the house of the fruit grower when the temperature in the orchard falls to freezing. It consists of an accurate dial thermometer electrically connected with a bell and switch in such a way that it will cause the bell to ring at any desired temperature. It rings until the person is aroused and opens the switch. It is hoped the alarm will prove a great convenience to those who have tar to burn for the purpose of keeping off the frost. The fruit grower may sleep soundly so long as his fruit is not in danger; but let the weather turn cold in the night and he is sure to know it in time to light his tar.

## AGRICULTURAL ENGINEER.

### The Good Roads Convention in Sacramento.

The convention held at the capital last week in the interest of road improvement was unquestionably one of the most business-like and satisfactory as well as most important ever held in the State. The attendance was large and representative, delegates being present from all parts of the State, and they represented all sorts of road interests. There was a large contingent of county supervisors who bore with becoming patience the free imputation of bad road making which was put to their account. There were several county surveyors who smiled when repeatedly told that it is a very different thing to be a good surveyor and a good road engineer. There was a host of people who only knew that they were heavily taxed for public work which gave them no good roads, and who desired the adoption of a wholly different system of road construction and maintenance. There were many who believed in bonding and some who did not. On the whole, there was as fine a variety of opinions as to what would give us better roads as can be imagined. It seemed at first that there might be some quite loud clashing of opinions and interests, but the events proved quite otherwise and the convention was earnest, peaceful and practically unanimous in the declaration of its conclusions.

*Governor Budd on Good Roads.*—The convention was formally opened on the afternoon of Feb. 7th by Governor Budd with a brief extempore address. From his intercourse with the members of the Legislature he believed they would co-operate with the Good Roads Convention in its efforts to give the State good highways. He said he did not think so many people have ever assembled at the Capitol who have as their purposes the desire to legislate for the benefit of the entire State. Governor Budd also said:

"We have in this State numerous commissions. There is a commission for almost everything except for good roads. I believe if you advise the Legislature to place the maintenance of good roads into the hands of a competent road engineer, you will have accomplished much.

"To obtain good material for roads is, in my judgment, the most important thing for the convention to consider. I am informed that there is a large deposit of trap-rock at Folsom, and, if it is broken well, it will pack like cement. You understand that the State owns an extensive plant at Folsom; and with the work done there to prepare the rock, it should be but a few years before the roads in California, instead of being a disgrace, should be the finest and best in the United States.

"I will heartily join with you in recommending to the Legislature action that will result in the State having roads that will be the pride of the State, and I think the Legislature will co-operate with you."

*The President's Address.*—A. B. Lemmon of Santa Rosa is president of the Good Roads' organization, having served since its beginning, and being reelected by unanimous vote for the coming year. He delivered a very able and carefully prepared address on road matters, suggesting many progressive actions which finally received the approval of the convention in committee reports which will be given later in this report. In the course of his address Mr. Lemmon enumerated the essentials of a good road, as follows:

First—The grade must receive careful consideration. It should be as nearly uniform as can be secured. The maximum grade now recommended by practical road engineers is four per cent, or not more than four feet to every hundred feet traveled. A horse will trot with perfect ease going up or down such a grade, and there will scarcely be noticeable friction to overcome in hauling a load because of so slight an elevation. And, as nothing is stronger than its weakest point, so no road is better for general draft purposes than its poorest portion. A single steep place may control the draft capacity of a team on the entire line.

Second—The good road requires drainage. It will not endure long unless well drained, and this is not possible except where proper grades are established.

Third—A third essential to a good road is that it be impervious to falling water. Another has well said that it must be a "perfect roof and not a sieve." This involves the question of materials, the two chief ones to concern us being stone and gravel, the last, of course, being least desirable.

Fourth—Sentiment has materially changed recently in regard to the width of roadbed that should be stoned or graveled. Reducing the width reduces the expense correspondingly and brings the improved road within the reach of more people. Many engineers now recommend that the stone road be built only wide enough for a wagon to pass over it. There might be occasional wider places at which meeting teams could pass each other. By the side of this permanent highway a good dirt road should be provided, over which, except when muddy, teams without heavy loads would be driven from choice. It has been suggested that the trees in a highway should be between these two tracks and not at the sides of

the road, where they consume the substance of the adjoining farm lands. The suggestion seems worthy of consideration.

Fifth—It is agreed by all authorities that large stone-crushing plants are far more economic than small ones for the preparation of road metal. Hence such plants should be provided at county or city expense, or communities should unite in establishing them as an element of the good-road movement.

Sixth—In construction all roads should be puddled with water and should be rolled by steam, not by horse rollers. Reasons for this are that the latter kind of rollers are not heavy enough for the most effective work, and the hoofs or shoes of the horses undo in part the work of the roller. Hence every county should own a large steam roller, and require all road contractors working for the county to use it. Again, even the best roads require attention. Every break should be repaired as quickly as possible. If this is not done the road will go to ruin. This gives rise to the question as to the plan of road repair that will be most effective and, at the same time, most economic.

*Gen. Roy Stone's Mission.*—The honored guest of the convention was Gen. Roy Stone, who is at the head of the Good Roads Inquiry Bureau of the Department of Agriculture. Gen. Stone is an earnest, kindly and well informed good-road promoter, and the convention showed him and his work many marks of favor. He participated in the work of the convention throughout. At the first session he made a brief address. He said that since he has seen some of California's domain and people the country reminded him of France, and what the roads are to that country. He read from a periodical, in which it was stated that the wagon road system of France has been of far greater value than the railroad. Such roads have been of material contribution to the prosperity of the country. The prosperity of France is attributed to its good roads.

The territory of California, said General Stone, is much larger and greater than that of France, and it will be more prosperous if the plan of building roads in France is followed out in this State. California needs good roads, and to get where France is in the matter of good roads the State will have to do as France has done. It was only by the State taking it up that the whole of France got good roads.

Just what is necessary for the people of California to do he could not tell, as the various portions of California are so different. The people of California have the material for constructing roads where it can be hauled to convenient places, and where it is not necessary to transport it up steep hills and mountains.

Many Eastern railroads have volunteered to carry road material at the bare cost. If the railroads will not do that for anybody else, they should do it for themselves. Good roads are feeders to the railroads. The State authorities should go to the railroads and endeavor to obtain low rates for the transportation of material for the construction of good roads. If low rates are obtained the people should certainly have good roads. Farmers would haul the material to the site of the roads. Referring to the use of convict labor, General Stone said that such labor is generally in use in North Carolina. Such class of work might be applied to the vagrants and beggars in this State.

*The Committees.*—After the several addresses to which allusion has been made the convention arranged for committees, to which leading topics should be referred. These committees were as follows:

State Engineer and Work of Office—Professor Soule of Berkeley, Preston R. Davis of Sonoma, Bradford Morse of Riverside, A. S. Cooper of Santa Barbara, W. D. Lawton of Sacramento.

County Road Engineers, Appointment and Duties—A. B. Brown of Calaveras, O. G. Hemphill of San Joaquin, L. G. Hare of Monterey, James M. Hunter of Kern, William W. Gray of Merced.

Road Districts—J. A. Linscott of Santa Cruz, H. C. Beli of Butte, George W. Burbank of Marin, J. O. Maude of Riverside, A. Weideman of Monterey.

Amendments to Bond Laws—A. C. Hinkson of Sacramento, William Palmtag of San Benito, John L. Beecher, Jr., of San Joaquin, Paul P. Austin of San Jose, T. H. Buckingham of Vacaville.

Width of Roads—S. F. Ayres of Santa Clara, J. C. Boyd of Sacramento, Orrin S. Henderson of Stockton, W. P. Stonerod of Merced, J. W. White of Bakersfield.

Constructing Trunk Lines—William Johnston of Courtland, A. Greeninger of San Jose, R. A. Thompson of Sonoma, Abbot Kinney of Los Angeles, Robert P. Allen of Amador.

Road Location—Duncan McPherson of Santa Cruz, S. N. Knight of Sutter Creek, F. E. Smith of Madera, Fred M. Miller of Nevada City, J. H. Laugenour of Colusa.

Width of Tires—J. A. Filcher of Auburn, Mrs. Mary F. Merrill of San Joaquin, H. F. Wynne of San Francisco, A. P. Stanton of Santa Cruz and E. N. Eager of Solano.

Hon. William Johnston resigned from the Committee on Trunk Roads and Supervisor Curtis acted in his place.

*Width of Tires.*—The convention adopted the committee report on this subject, that all vehicles of a carrying capacity of 2000 to 3000 pounds should have tires not less than three and one-half inches in width, and wagons of a carrying capacity of 3000 to 5000 pounds should have tires not less than four inches in width, and tires should have an additional width of half an inch for each 2000 pounds additional carrying capacity, six inches being the maximum width re-



quired. It recommended that a law to carry the above suggestions into effect should be passed by the present Legislature, to go into effect January 1, 1897, and that a penalty should be attached for non-compliance after the time it goes into effect.

**State Engineer.**—On this subject the special committee recommended: First—That the office of the State Engineer be not established, for the reason that, in the judgment of the committee, a department of highways be administered by an advisory board of three members, to be appointed by the Governor, would better promote the wishes and demands of our citizens in this matter. Second—That the proper functions of such advisory board should be the collection and spreading of all useful information on the subject of the construction and maintenance of highways, and advising and assisting the road authorities in each county of the State, to the end that every highway built or repaired shall be made the best in location, plan and construction, considering all the needs and circumstances of the case. The convention adopted the recommendations of the committee.

**County Engineers.**—The following was approved by the convention: That such legislation should be enacted as will permit Boards of Supervisors to employ competent road engineers in the laying out and constructing of roads; such engineers to be employed at the will and under the immediate direction of the Board of Supervisors. It did not approve the passage of a general law making it mandatory for each county to employ a permanent county road engineer. If a law can be framed that will not be special legislation, the committee suggested the passage of a measure permitting such counties as may desire to provide for a permanent county road engineer.

**Road Location.**—The following declarations were adopted as the sense of the convention: First—That the survey of the roads should be plainly marked and the permanent monuments set at least every mile, and not less than two to each road. Second—That in procuring the right of way the Supervisors are not to pay more than double the assessed value of the land at the time the land is condemned. Third—That all lands taken for the opening, widening or straightening of roads be paid for from the county general fund.

**Road Districts.**—The convention gave much time to debating whether the incorporated towns should bear any part of the cost of opening new roads, and finally adopted the report of the committee without change as follows: First—The laws governing the size and organization of road districts remain as they now exist. Second—That road districts may vote a special tax for road purposes, not to exceed forty cents on each \$100 of the assessed valuation of any one year. Third—That all expenses attached to the laying out and opening up of the new roads be paid from the county general fund.

**Amendments to Bond Laws.**—After a vigorous discussion on the subject of bonding counties for the construction of roads, it was clearly seen that the majority of the convention favored bonding. The following from the committee on that subject was adopted: That the amendment to the Constitution, adopted in 1892, relative to county and municipal credit, fixed the limit of such credit at forty years, but the Legislature fixed the limit to which municipalities may issue its bonds at twenty years. The law should be amended, fixing such limit at forty years, as provided for in the Constitution. Under such amendment county governments could issue bonds for any period less than forty years.

**Width of Roads and Roadbeds.**—The convention unanimously adopted the following recommendations of the committee: The minimum width for county roads should remain as at present fixed by law, namely not less than forty feet; the maximum width should not be specified, inasmuch as widely varying conditions throughout the State, varying density of population per section traversed, varying grades necessitated over hilly or mountainous regions, require special consideration, and where, in some localities, eighty feet width of road would be ample, yet there are other localities without number where boulevards of 120 feet in width are more desirable.

Relative to the width of macadam or gravel to place on the road as an economic proposition, we submit that owing to the cheapness or comparative inexpensiveness in first cost of an eight-foot roadway of macadam and its economic features in cost of maintenance, and the further fact that more miles of good roads of an eight-foot width may be constructed with the same moneys than ten or twelve-foot widths, that for the foregoing consideration we respectfully recommend the eight-foot width of macadam. There are, however, considerations of the amount of tonnage hauled over roads and quantity of teams traveling over roads, especially those in close proximity of cities and towns, where it is more expedient and more economical to the traveling public to make the said roads so macadamized from twenty to forty feet in width.

**Trunk Line Roads.**—The following resolutions were introduced by Abbot Kinney of Los Angeles, and were adopted by the committee and by the convention: "That all roads should be managed exclusively by the counties severally; that the varying condi-

tions in this State indicate that the broadest latitude should be given the different counties to adopt and change their system of road management."

The following suggestions for changes in the road laws were also suggested by the committee and approved by the convention: The Boards of Supervisors of each county in this State may, in their discretion, declare certain main roads of the county trunk roads, which said trunk roads must be principal thoroughfares running through one or more townships, into which main roads minor thoroughfares or township roads lead.

For the purpose of improving said trunk roads, or keeping them in repair, the said Boards of Supervisors may levy a general road tax not to exceed two mills on each \$1 valuation of property in said county in any one year, all the property in said county of every description to be subject to the levy of the said general road fund tax. The money raised by said tax shall be applied exclusively to the roads which have been declared trunk roads by the said Board of Supervisors. The said general road fund tax shall in no way interfere with the present road fund tax as now levied.

The committee further recommended that if the law as proposed above is impracticable the Legislature be requested to declare by act that the true interpretation of the law is that where the supervisors so determine, the matter of subjecting all property in the county for taxation for improving the main roads, including the property of incorporated cities, may be submitted to a vote of the inhabitants of said incorporated cities or towns.

Other proceedings of the convention will be described in our next issue.

## THE FIELD.

### Sacaline and Mangel-Wurzel.

TO THE EDITOR:—I have just received a few lines from two persons, both readers of the RURAL. One of them writes:

"Please inform me as to just what you think of the new forage plant, sacaline. I do not wish to plant it unless I am sure it is a good thing."

The other party writes as follows:

"I am thinking somewhat of raising mangel-wurzel seed for sale. Will you be kind enough to inform me as to the best way of raising the beets for said purpose, the proper time to plant the seeds, etc., and whether it is necessary to pull the beets in the fall and transplant them in the spring, or can they remain until the next season. If either way will answer, will you please state which plan you consider the best, etc."

Perhaps I had better give the information asked for in the columns of the RURAL, as doubtless many others might be interested in the matter.

I have received since January 1st twenty-five catalogues, mostly from Eastern seedsmen, and have very carefully examined all of them, especially as to what they have to say about "sacaline," which is being quite extensively boomed this season. I notice that a number of them whom I consider among the most conservative and responsible of any in the United States do not catalogue it, evidently for the reason that they are as yet doubtful as to its value as a forage plant.

W. Atlee Burpee & Co., of Philadelphia, Pa., devote a page and a half in their catalogue for 1895 about "Two Sensational Novelties in Forage Plants." One of them is "sacaline." It would pay any one who is thinking of trying this new novelty to send for their catalogue.

One of their head men, who had formerly been head gardener for one of the largest seed firms in Germany, was instructed to write without reserve his honest opinion about it. I will quote briefly and unconnectedly:

Look out! for you will be terribly disappointed if you expect to realize the hopes that the glowing descriptions from Europe would seem to warrant. In a couple of years they will make roots the thickness of a man's arm, circling and running in all directions through the ground. When once the plants are established, you may try with all your might, but you cannot destroy them; they simply laugh at you, and grow so much the stronger. Farmers, do you want to spoil and infest your land? Then plant Polygonum (sacaline).

Peter Henderson & Co. say as to this new novelty, that they are not prepared to endorse the extravagant claims put forth by some seedsmen; but to those of their customers who desire to try it they will present a packet of the seed free of charge to those ordering goods, if they request it.

In view of the foregoing, I shall take the advice of these large seed firms and "look out!" and let others try it who wish to; I will await the results.

I have a friend, who some years ago planted what he said was a very valuable forage plant (Johnson grass). He soon found it was spreading rapidly, and did not answer the purpose he intended it for, and for the past three years he has been trying to exterminate it, and thinks he has finally, after a great deal of labor and expense, conquered it.

He now thinks of trying "sacaline." I tell him to go slow; he might be "jumping from the frying pan into the fire," and find in a few years he has a worse enemy to contend with than "Johnson grass."

### MANGEL-WURZEL.

This variety of beet, whether raised for stock or for seed purposes, succeeds best here planted in

February, as early in the month as the ground begins to get a little warm and in just the right condition to plow. I plow my land from eight to ten inches in depth and harrow thoroughly. I mark out the rows three feet apart with a marker with three runners, made of two-inch plank, six inches wide and three feet long, V-shaped on the bottom to prevent them slipping in the least to one side. Nail on the top a few narrow boards six feet long with one runner exactly in the middle. Place on a heavy weight or ride. By putting on an old pair of buggy shafts, and using a small horse, one can make the rows almost exactly straight (after the first one is made so) by letting one runner follow the outside line. I open my furrows with a very small plow; a single shovel plow will answer. I sow the seed by hand at the rate of about five pounds to the acre, and endeavor to get them as evenly as possible. I cover them with a one-horse John Deere cultivator with five teeth. Simply take off the front plate (not the tooth) and extend the cultivator to its widest capacity—about three feet. This mode of covering will answer equally as well for either corn, peas or beans when sown in drills. I then smooth the ground nicely with a one-horse "clod-masher."

As soon as the beets are a few inches high, I cut them out with a hoe in clumps ten or twelve inches apart, and finally thin them by hand, leaving them about a foot apart. I cultivate at least once a week until the latter part of June, sometimes later, according to the season. For many years I pulled the beets I intended to raise seeds from, topped them and let them get thoroughly dry, then piled them in the barn like stove-wood. In February I transplanted them in rows three feet apart and one foot in the row. I would then cultivate them as before stated in this article.

In the spring of 1892 I raised a fine lot of mangels and let them remain in the ground the following winter. I cultivated them well the next spring and summer and raised as fine a crop of seed as I ever saw, notwithstanding writers on the subject say: "Unless beets are pulled at the end of the first season, and allowed to thoroughly wilt before being transplanted to raise seed from, the seeds will be worthless, and, when planted, will go to seed when the beets are many times not larger than an inch in diameter and will be like a stick."

I have found out by practical experience that with me this has not been the case, as I planted a large lot of beet seed last season that was raised in the manner before stated and have now beets that one of them will make a good feed for a cow, and none of them went to seed. They say that "beets must have rest in order to produce good seed."

Mine have it from July 1st, when all perceptible growth stops, on account of the soil being too dry, until the first fall rain—generally early in October—when they start again and grow slowly until cold weather commences, usually late in November, when they rest again until the mild weather comes in February, when they start again in good earnest and make a rapid growth. I shall, however, experiment further in this matter in order, if nothing more, to satisfy my Yankee curiosity. To my correspondent I would say try both ways.

IRA W. ADAMS.

Bay State Garden, Calistoga, Cal., Feb. 10, 1895.

We have already advised our readers that the Saghalin polygonum or sacaline should not be planted where good forage plants will grow. The description given in University Bulletin 106, which was published in the RURAL of Dec. 22d, says: "The Saghalin polygonum is a coarse plant and is not advocated as a substitute for well-known forage plants where the latter are satisfactory. For dry lands, scant of useful growth, the plant is commended for trial." The description all through shows that the plant is advanced for planting on waste lands for cattle browse and forage. On such places it is necessary to have plants which will hang on, and hang on hard. We do not have any idea that the polygonum will hang on and spread like Johnson grass. It is wholly different in its manner of growth.

We believe the plant has been extravagantly and unwisely boomed as a forage plant, and whoever follows such advice and puts it in good land which will carry alfalfa and other good crops will make an awful mistake. Put it where such plants will not grow, and you stand a chance of getting some feed out of them.

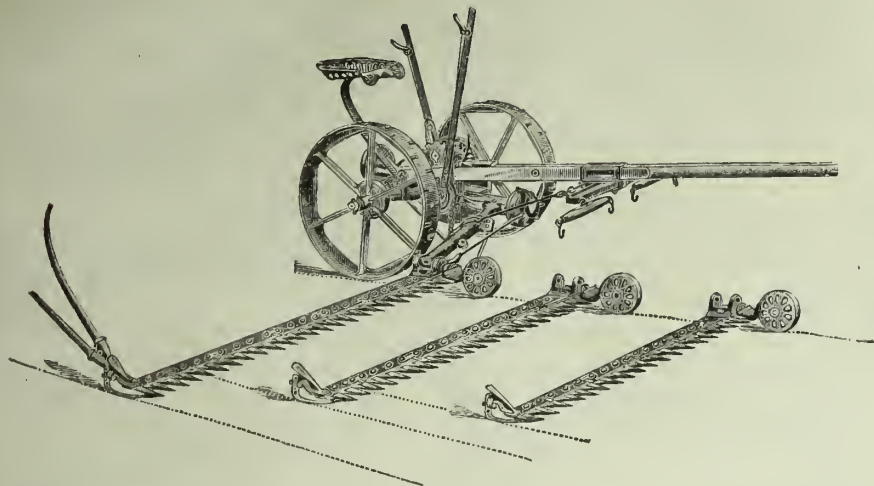
There is now such a war among the Eastern seedsmen over sacaline that you cannot tell where the truth lies. The men who boom it have all the available seed and plants, and the men who condemn it have not. It is the old story of the "outs" against the "ins". It will, however, do some service if it holds the popular mind steady on sacaline. No man should put in much of it without trial on his own place, and this he should put on bad ground, not on good. A little experiment will not be dangerous like a little Johnson grass would be. It grows more like a shrub, and its roots do not carry the power of rooting from scattered fragments. If you have clumps of sacaline, and do not desire to keep them, you can cut them out as you would willow. All that has been published about making hay of sacaline is, we think, fanciful. You might as well try to make hay out of young mulberry branches.—ED. RURAL.



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It is the lightest, strongest, and without exception the best Mower in the world.

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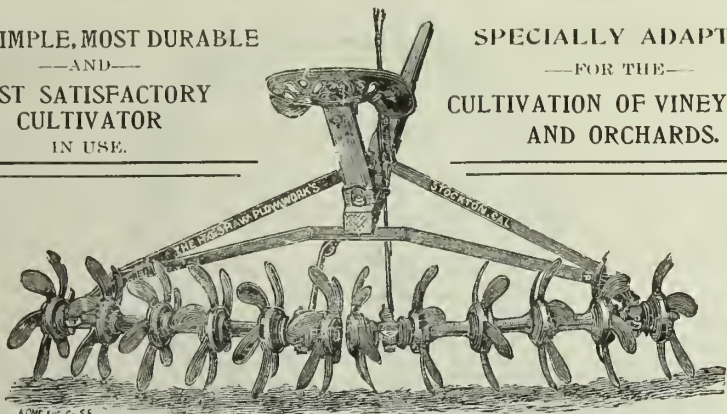
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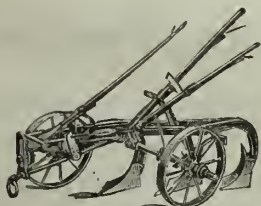
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—FOR THE—  
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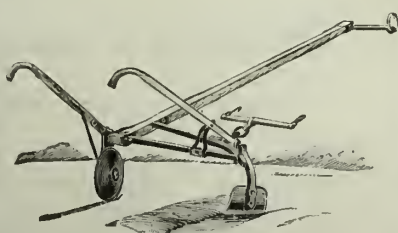
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Has EXTRA STRONG and HIGH BEAMS, being twenty-three inches in the clear; prevents clogging with trash.  
HIGH WHEELS, twenty-six inches in diameter.  
AXLES, one and five-eighths inch cold-rolled steel.  
THE HITCH is center draft, reaching from rear axle.  
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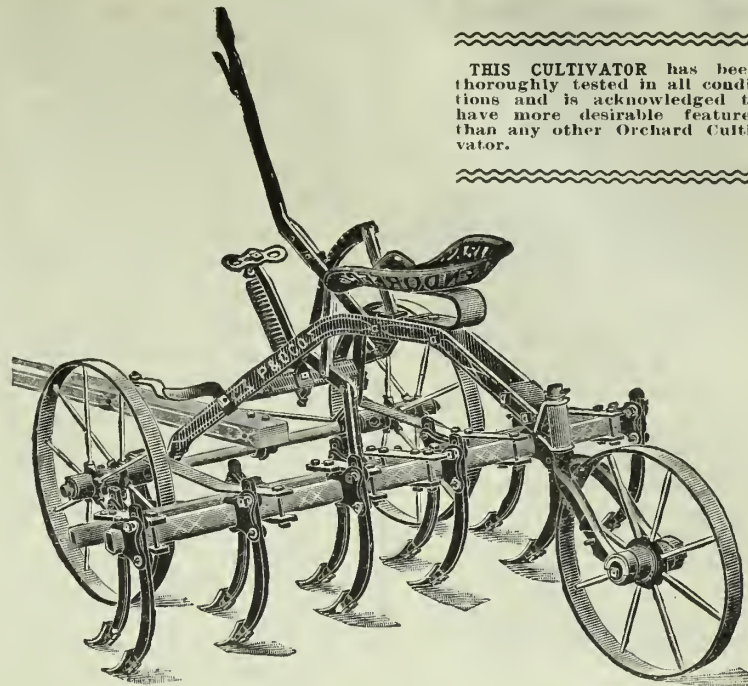


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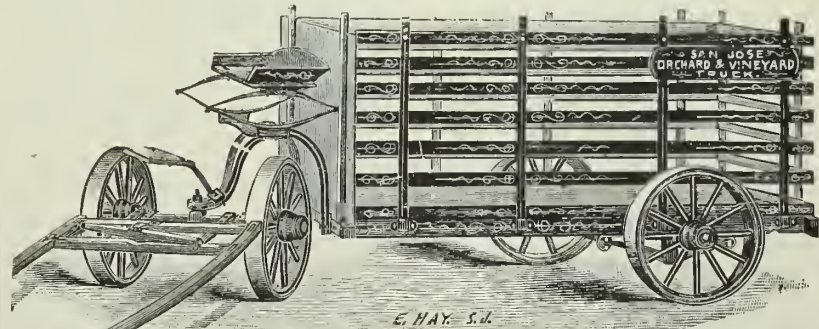
THE SHANKS OR LEGS, to which the shovels are attached, are made from steel with their front edge made sharp. These Shanks or Legs have a series of holes so they can be raised or lowered to meet any requirements.

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SIZES. No. 5, five feet, 11 shovels; No. 6, six feet, 13 shovels; No. 7, seven feet, 15 shovels. Write for prices.

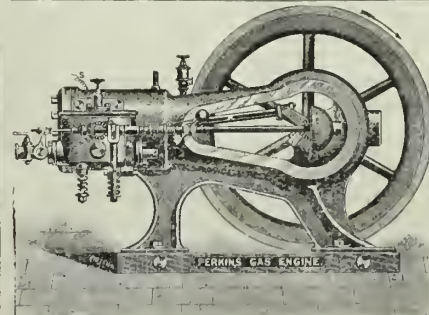
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## THE HOME CIRCLE.

## Remember.

When comes the sad year to its close,  
And leaves fall fast about thee, think,  
In other gardens summer glows,  
And others, thirsting, breathe and drink  
The perfume of the rose;  
Bethink thee, even in thy snows!

And when thy rose is blossoming, know,  
Though thine laugh in its rosy crown,  
In other gardens, stripped and brown,  
At other foot dead leaves fall down;  
Dead roses lie beneath the snow,  
Remember, when thine bud and blow!

—Grace Ellery Channing.

## The Blind Man.

Over the way a blind man dwells,  
Whom all our little village knows,  
As up and down the streets he goes,  
And spreads his simple wares, and sells.

And all the neighbors pity him;  
But sometimes when he comes to me  
To ask me of the things I see,  
Unknown within his world so dim,

I almost wish that I might go  
With him into that darkened land,  
Nor see nor try to understand  
The things that make me sorrow so.

—John L. Best.

## Sam Outwitted Him.

Farmer Kendrick had brought in an armful of snow-covered logs from the woodpile at the north end of the house, throwing them down on the stone hearth with a noise like a small earthquake, when Carrie Brown started up.

"Five o'clock! Oh, I had no idea it was so late. I must be going home."

"Allow me to accompany you, Miss Brown?"

"You'll let me see you home, Carrie?" Captain Logan and Fred Jones both spoke at once, but Carrie shook her head.

"I prefer to walk home alone," she said, gaily.

"About the sleighing party to-morrow night?" asked Fred, anxiously.

"I—I have promised Captain Logan," said the village beauty, a rosy tint suffusing her cheek.

"But, Carrie, I thought it was settled between you and me two weeks ago!" exclaimed Fred with a frown.

"Was it? I am sure I had forgotten it."

Fred was silent. Captain Logan's smooth, soft-toned voice broke the silence.

"I exact no promises," he said gallantly, "but if I am not punctual to the hour and the spot Miss Brown may draw her own conclusions."

And Carrie went home.

She was very pretty, this bright-eyed New England damsel. Fred Jones had loved her ever since they were children together, and Captain Logan, who had come down to spend the Christmas holidays with his cousins, the Kendricks, had become so fond of those bright blue eyes and golden hair that he had prolonged his visit into January.

"Pon my word, she's a regular beauty," said the captain, staring through the tiny window panes at the retreating figure of Miss Brown.

Fred Jones looked quickly up at him, as if he would have liked to knock him over into the fireplace, but he refrained from any such demonstration.

"A beauty," went on the captain, "and it's a thousand pities she should be wasted on any of the country bunnies who vegetate among these wildernesses. Sam, you young villain, are those boots of mine blacked yet?"

"No, they ain't," said Sam, crossly.

"Well, what's the reason?"

"Cause I ain't had time."

"See you find them then, quickly, too," said the Captain. And Sam glowered after him as he went gaily up the stairs.

"Just wish I had the firin' of him out," said the boy gloomily. "It's 'Sam, do this,' and 'Sam, do that,' and 'Sam, where's the warm water?' and 'Sam, what the deuce do you mean by 'ettin' my fire go out?' and not a cent as he guv me yet—no, not so much as a pleasant word. I wonder if he means to stay here always?"

"You and I are about equal in our

love for him, Sam," said Fred Jones, laughing.

"I heered him talkin' to Miss Carrie about goin' sleigh riding to-morrow night," said Sam, shrewdly. "I'd jes' like to put 'Kicking Tom' in the shafts; I would if it wern't for Miss Carrie. He don't know nothin' about horses, that there militia cap'n don't." And Sam chuckled.

"I say, Mr. Jones, why don't you get beforehand with him? Miss Carrie don't really care for him, she's only dazzled like."

Fred Jones frowned slightly; honest Sam was not exactly the kind of Gany-mede he cared to have meddle with his love affairs.

"Miss Brown must choose for herself, Sam," he said, and Sam went back to his work, secretly wondering how a young lady gifted with ordinary sense could hesitate for a moment between the captain and Fred Jones.

The night came—a perfect night for sleighing expeditions and rustic love making, the roads hard and well packed, and a glorious moon shining down whitely, as if a rain of silver were deluging the whole world.

"Couldn't be better weather," said the captain. "Sam, where are the sleigh bells?"

"Dunno," said Sam. "There's them old jinglers in the garret that used to belong to Deacon John Kendrick, that was in the revolutionary war, and there is the two cow-bells that Mary Jane might scour up with ashes—"

"Pshaw!" said the captain. "Do you take me for Rip Van Winkle? There's a pretty little string somewhere, for I saw them when Mrs. Kendrick went out day before yesterday."

"I hain't seen nothin' on 'em," said Sam, stolidly.

"Come, come, Sam, don't make yourself out any stupider than you are by nature," said the farmer, laughing nevertheless, for the captain's airs were fast wearing out his welcome, and he secretly sympathized with the much-abused Sam.

"I guess they're out in the barn. You had better go with him, captain, if you expect to find 'em. Our Sam is dreadful thick-headed when he chooses to be."

"Come along, my fine fellow," said the captain, collaring Sam and marching him off in the direction of the old red barn. "We don't need any lantern in this moonlight, that is one comfort."

"Where are the stairs?" demanded the captain, as they entered the barn. "Ain't none," said Sam. "It's a ladder."

"Up with you, then," said Logan, but Sam shrunk back.

"I wouldn't, not for \$50," said Sam. "Old John Kendrick hanged himself from the middle beam fourteen years ago, and folks say he stands up there with a rope around his neck every moonlight night."

"Stuff and nonsense," cried the captain, in accents of contempt. "You cowardly lout; stay where you are, then, and I'll go myself."

He sprang lightly up the rounds of the ladder and disappeared through the trap-door.

"The ghost? Right under the middle beam by the windy was the place where—"

"Where is it?" he called.

"Blockhead! I mean the string of bells."

"Look for 'em yourself," said Sam, sulkily. "I don't know where they be, and, what's more, I don't care."

"I'll settle with you, my fine fellow, when I come down," said the captain, threateningly, as he groped about in the dim light, which came through a cobweb-draped window at either end of the barn chamber.

"Don't hurry yourself, cap'n," rejoined Sam, in a jeering tone.

As the captain plunged into a dark corner there was a jingle, and the string of bells, suspended from a nail, hit him directly on the neck, so like the grasp of death-cold fingers that he could but start.

"Oh!" said the captain, nervously, "Here they are. Catch 'em, Sam! Hello! Where's the trap door?"

And it took the worthy captain fully

sixty seconds more to realize that the trap door was closed and fastened on the lower side. He rushed to the window and threw it up, only to see Sam speeding up the hill.

"Hail-lo-o-a!" yelled Captain Logan. "Come back, you scoundrel—you ill-conditioned lout—you imp of evil!"

Sam turned around and executed that peculiar gyration of the fingers in connection with the nasal organ, which is supposed to express the extremity of scorn.

"You'll find the ladder on the barn floor, cap'n," hooted the young rebel, "an' don't be afraid of the ghost; it's very harmless if you let it alone."

"But, Sam, Sam, come back. I'm to be at Mr. Brown's at half-past seven o'clock."

"Don't worry," bawled Sam. "Miss Carrie won't wait long before Mr. Fred'll be on hand."

The captain danced up and down on the floor in an ecstasy of rage, as Sam disappeared over the crest of the hill. He knew very well if he possessed the lungs of Boreas he could make no one hear.

He sat shivering down on the hay, starting nervously at the sound of horses feet below, and thinking how disagreeably a bar of moonlight which streamed down from a crack in the roof resembled a tall white figure standing under the center beam. He could almost fancy the rope around his neck. Pshaw! And the captain jumped up again with starting dew on his temples, even in the freezing atmosphere of the barn chamber.

"What's to be done?" he asked himself. An echo, if echo has any common sense, would have answered:

"Just nothing at all."

Sam had outwitted him. And pretty Carrie and Fred Jones, with his red cutter and a great chestnut horse!

The captain was wild at the thought; surely he was vanquished.

"I won't wait another moment for him," said Carrie Brown, coloring up, with tears in her blue eyes. "Go on, girls, I shall spend the evening at home."

"There's plenty of room for you in our sleigh, Carrie," coaxed her brother. "Bessie Andrews will be glad to have you along."

"No, she won't, either," pouted Carrie. "As if I would spoil all her fun! No, if I can't have an escort of my own I'll stay at home and mend stockings, and I never will speak to Captain Logan again."

Charlie Brown was on the point of arguing the matter with her sister, when the door opened and in walked Fred Jones.

"Not gone yet, Carrie? Where is the captain?"

"I don't know," said Carrie, tartly, "and I don't care. Am I Captain Logan's keeper?"

"Will you go with me?"

"Yes, I will," said Carrie, her eyes lighting and shy smiles dimpling her face.

"Of course," said Fred, "I can't expect to make myself as agreeable as the city captain, but—"

"The captain! The captain!" cried Carrie, a little irritably. "I'm sick of the sound of his name. I never want to see him again. What a nice new cutter this is, and how easy the wolf robes are!"

"Carrie," whispered Fred, as he touched up the horse, and felt her nestling close to him, "is it for always?"

"Yes, always," she answered. \* \* \*

"Jerusalem!" said Farmer Kendrick. It was past ten o'clock at night, and the old gentleman had come out as usual before retiring to rest to see



## World's Fair HIGHEST MEDAL

awarded to

### Dr. Price's Cream Baking Powder

The highest award was given on every claim, comprising superiority in leavening power, keeping properties, purity and excellence. This verdict has been given by the best jury ever assembled for such a purpose, backed by the recommendation of the Chief Chemist of the United States Department of Agriculture, Washington, D. C., who made an elaborate examination and test of all the baking powders. This is pre-eminently the highest authority on such matters in America.

This verdict conclusively settles the question and proves that Dr. Price's Cream Baking Powder is superior in every way to any other brand.

NOTE.—The Chief Chemist rejected the Alum baking powders, stating to the World's Fair jury that he considered them unwholesome.



that the dumb members of his family were all straight and comfortable. "I do believe that's old John Kendrick's ghost come to life again, poundin' like all possessed on the barn chamber floor!"

"It's me-e! It's me-e!" bawled the captain. Unfasten the trapdoor and let me out!"

Slowly the farmer lifted the ladder to its place. With rheumatic awkwardness he climbed the creaking rounds and undid the hook from its clasp.

"How in all creation came you here?" he demanded. "Why, I thought you were out a-sleighriding with the gals."

"It was all the doings of that villain, Sam!" gasped the infuriated captain, his teeth chattering with mingled rage and cold. "I won't stand this sort of thing. I'll leave the place tomorrow."

"As you please," said the farmer, to whom the prospect of losing his guest was not unpleasant. "I'm dreadful sorry this should have happened, though. I'll talk seriously to Sam."

"So will I," gnashed the captain. "I'll break every bone in his body."

But Sam had taken particular care to go over to his grandmother's, six miles across the snow field, to spend the night, and the only person the captain saw was old Mrs. Kendrick sitting by the kitchen fire.

"You've lost your chance, captain, she said good-humoredly. "Dorcas Smith has just gone by on her way home from the sleighing party, and she says Fred Jones brought Carrie Brown in his new cutter, and they're engaged."

The captain left the next day, and Mrs. Fred Jones has never seen him since. And when the affair came off, Sam got a piece of the wedding cake big enough to give him dyspepsia for a week.

#### Fashion Notes.

The fashion of wearing fancy waists with black skirts is quite as much in vogue as ever, and enables one of limited means to have many different toilettes. For theatres and small parties it seems to be the universal style of dress. Beautiful waists are made at a very small cost if one has tact and ingenuity. Old waists may be remodelled with the addition of lace and velvet and new sleeves. This is quite imperative, as it is almost impossible to make last year's sleeves conform to the present style. A waist of pink or blue that may have become slightly soiled can be covered with white chiffon, shirred back and front at the waist line, also on the shoulders. Make new sleeves of velvet that matches the silk, using the pattern that has one or two puffs and comes to the elbow. If the waist is high neck make a stock collar of the velvet; if low or square neck, trim with ribbon and make bows with ends that stand upright by means of a stiff lining for the shoulders. Cut the waist slightly pointed back and from around the bottom and trim with a fold of velvet or twist of ribbon. Long suede gloves that reach to the elbow should be worn.

Some of the leading dressmakers and designers are trying to do away with the recent models of sleeves that require enough material to make an entire bodice. There is a decided tendency toward tightening the sleeves just below the elbow, as here it is ill-proportioned and spoils the natural outline of the arm in a place where it should be particularly graceful. One of the newest shapes shows a close coat sleeve, which not only appears from wrist to elbow, but shows from elbow to shoulder seam. A very full drapery is arranged back of the arm from shoulder to elbow, but this does not conceal the coat shape outline of the sleeves its entire length.

One of the most popular dress skirts of the season is shaped with the front and side breadths narrow at the top and flaring broadly from the knee down. In the back are three umbrella gores, each so narrow at the top that a single box plait adjusts them to the waist band. These gores, one in the

center and one on each side, increase to great width as they near the hem, falling in natural wavy folds without even a hint of a dip behind. On the contrary, the back breadth seems very often to be a trifle shorter than those each side.

Sashes are very popular again, particularly when they are of the new chine ribbons. A plain blue taffeta silk, made up plain for a young girl, has a sash of blue and chine ribbons. It is tied in a large bow in the back, and the ends fall on either side of the plaits in the skirt.

#### Nellie's Intemperance.

The other day I made a call upon an old school friend whom I had not seen for some time, and what I saw in my short call so impressed me that I feel impelled to tell of it in order that others may learn a lesson.

I found Nellie seated in the sitting room of her pretty little house, sewing for dear life upon a dress for her little girl. The dress was much beruffled and elaborately trimmed with lace, and there was a great deal of work upon it. Nellie seemed to be very nervous and looked careworn and faded. While I was there, her little girl daughter, aged about five years, came in. She was a bright, intelligent-looking child, but seemed to be afraid of her mother, who immediately told her to go and sit still and behave herself and not bother. Hereupon the child sat down in a corner, very quietly and sorrowfully, and said no more.

Nellie told me of the great amount of work she had to do, and it was never finished from day to day, and that at night she was too tired to go anywhere for amusement. Occasionally she entertained friends, she said, but doing so entailed so much work that she did not enjoy it. I also found out that she had no time to read or take any interest in literary or musical matters, from her conversation on such matters and from what she told me. She used to be a fine musician, but she so rarely played of late that she was out of practice, and her fingers were fast losing their skill.

Then she showed me over her house and the various articles of fancy work she had made. I now fully understood the reason why Nellie had no leisure. All her rooms were overflowing with so-called fancy work, most of it being very elaborate but anything but artistic. On entering a room one was at once conscious of a feeling of oppression and as though one were an intruder. It was unsafe to move about, as it required much skill to steer clear of the numerous weak-kneed tables, stools and other articles which were freely scattered about. Every chair back was covered with a scarf, as was every picture frame, even the mirror and mantel-piece being made the resting place of some kind of a scarf or tidy. Some of these were really ridiculous, as for instance one made out of common sheet wadding and painted, beribboned and tasseled in a wonderful manner. If one sat in a chair one was in agony for fear the scarf on it would be injured, and no visitor would dare lean back while the hostess' eyes took note of every movement in so apprehensive a fashion which made both uncomfortable.

The tables were as numerous as the scarfs, and were generally loaded down with another load of fancy work and knick-knacks. Indeed, the room looked as if an exhibition of needlework was being held there. Nellie seemed to take a good deal of pride in all these articles and took much pleasure in explaining how some of the choicest ones were made and how much they cost. She knew all the details by heart and informed me that fancy work cost a great deal of money, to say nothing of the work! She showed me a basket in which she kept her photographs, which was made of an old grape basket, disguised and covered with plush and satin. This article had cost the modest sum of \$5, and a receptacle which would have cost one-tenth that sum would have answered the purpose better and looked prettier. All Nellie's

thoughts seemed to be devoted to her needlework, and she made me long to ask if she stayed awake nights planning and making it. She frittered away her time over it when she might have enjoyed better health, better spirits and have been better in every way if she spent her time over something more useful and satisfactory.

Of course every woman likes pretty things, and she will and should make and have them, but she should not destroy her temper, let her brain and heart get rusty and dull, make herself and family uncomfortable and waste her substance in doing so. Let her devote more time to reading and the cultivation of her brain, to her family and friends, and less to her needle, and she will be better and happier for it. What if she has less fancy work than her neighbor, or her children plainer clothes? She will be the gainer, for does happiness consist in such things?

When she does do ornamental needlework, let her make things that are really beautiful, artistic and substantial, and worth having. She should not waste one minute in working on cheap material, trying to disguise it so it will look like something better, for she will be almost sure to fail. Let her get the real thing to begin with, but have nothing too good to use. Above all, overcrowding should be avoided, and it is well to remember that a few really good and handsome articles are worth more than a whole cartload of cheap articles made haphazard, which are out of all harmony. Rooms should not be littered up with useless trash, good for nothing except to catch dust, and when a woman feels inclined to begin some ugly and silly bit of work, she should call a little common sense to her aid and desist.—Mary L. Turner.

#### DOMESTIC ECONOMY.

##### Domestic Hints.

**COCOANUT BALLS.**—Two grated coconuts, the same weight of sugar, the whites of three eggs. Mix all together. Make into small balls and bake in a hot oven.

**A CONVENIENT RICE PUDDING.**—Pour upon two cups of cold boiled rice a pint of milk. Rub the rice smooth, then boil it up in the milk. Remove from the fire, and add a half a cup of sugar, a bit of butter, two beaten eggs, essence of rose or lemon, and salt to taste. Put into a buttered dish, grate nutmeg over the top and bake half an hour.

**CELERY SAUCE (TO SERVE WITH BOILED TURKEY).**—Put a pint of milk on to boil in a double boiler. Cut fine six stalks of celery and add to the milk with a little salt. When the celery is done, which will be in at hour, stir in a spoonful of butter, rubbed into half a spoonful of flour. If the sauce seems too thick add enough milk to make it the consistency of good cream. Let it remain a few minutes, stirring constantly, and then serve.

**CURRY OF EGGS.**—Slice two onions, a carrot, an apple and a little celery. Fry them in one heaping tablespoonful of butter. Add three tablespoonfuls of flour and stir till brown; then add a teaspoonful of curry powder and mix thoroughly; stir in a pint of broth or milk and season with salt and pepper. Cover the saucepan and let it simmer fifteen or twenty minutes. Boil six eggs for fifteen minutes, then remove the shells, cut them in slices and put on a warm platter. Strain the sauce over them and serve with a border of plain boiled rice.

Bobbs—Juggs' wife says in all the ten years of her married life she hasn't broken a single plate, cup or saucer.

Bobbs—Either she or Juggs must have an angelic temper.



## Throat Sore?

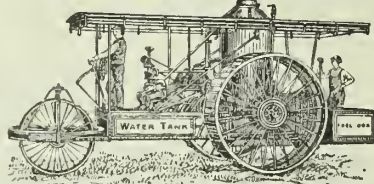
Better check it at once. There's no telling what a sore throat will do if you give it right of way. Uncertain remedies often cause dangerous delay. You had better make the cure sure with

## Pain-Killer

Known for half a century as a specific for sore throat, croup, coughs and all kindred troubles. Keep it by you for an emergency. It never fails. Sold everywhere. The quantity has been doubled, but the price remains the same.

Perry Davis & Son, Providence, R. I.

#### Price's Traction Engine.

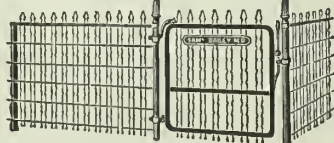


We have one of these engines that was used about one month last season and was taken back by us by reason of illness of purchaser. Engine is in perfect order, and in better working order than when first sent from the factory. A BARGAIN. Indicated power, 80-horse; Cylinders, 8x8; Wheels, 8 ft. high, 28 in. wide; weight, less than 10 tons. Price when new, \$4500.

HOOKER & CO.,

16 and 18 Drumm Street, San Francisco.

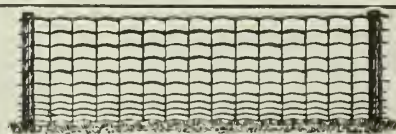
#### "HARTMAN" STEEL PICKET LAWN FENCE.



STRONGER THAN IRON—CHEAPER THAN WOOD—HANDSOMER THAN EITHER.

Protects a lawn without concealing it. Posts driven deep into the ground are anchored there. Of various heights and sizes of pickets. For Gardens, Parks, Cemeteries, Churches, etc. Examine into the merits of this fence and get estimate before deciding what to build. HARTMAN MFG. CO., 277 Broadway, NEW YORK. HARTMAN MFG. CO., 601-2 Manhattan Bldg, CHICAGO. Factories: FILLWOOD CITY, Lawrence Co., Pa. For "Handsome Calendar for '95" (The Chicago Tribune Says), send 4 cts. in stamps to the above.

In answering advertisements mention this paper.



#### "A CONDITION NOT A THEORY"

confronts the searcher for elasticity who runs up against The Page Fence. As he gathers himself together again, he ponders not over "the mistakes of Moses," but his own. He thought because it had proved a myth in other cases it might in this. The success of The Page has induced the makers of soft wire fences to claim boundless elasticity in every little "hump" or twist, or perhaps it is carefully stowed away at the end of the line. "Live fences" in the sense that a snake lives as long as its tail "wiggles."

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

#### "THE MARKET GARDEN,"

A MONTHLY JOURNAL FOR MARKET GARDENERS AND TRUCKERS. 50c. a year in advance. Sample copy mailed free on application. Address THE MARKET GARDEN COMPANY, P. O. Box 624. MINNEAPOLIS, MINN.

ST. JACOBS OIL is the Perfect CURE for

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WITHOUT RELAPSE, COLLAPSE, MISHAPS or PERHAPS.



## Patrons of Husbandry.

From Stockton.

Stockton, Feb. 11, 1895.

To THE EDITOR:—Stockton Grange has met every Saturday but one through this rainy winter of bad roads, for really but two of the several county roads have been passable, although by the grit of man and strength of horse they have been traveled.

Alive to the necessity of permanent road-beds and the folly of spending \$40,000 a year under the present road law in road patching, the grange sent its W. M., J. L. Beecher, to the Good Roads Convention on Feb. 7th, where he was put on one of the eight committees on the different parts of road building, wide tires and the bonding of the counties for lasting road-beds which would cost tax-payers no more than the existing law.

The past two weeks the brothers have been running their plows and hurrying wheat and barley in, for many could not work their land before. Now the heavy rain has stopped all. Farmers are "not in it" this year, and yet they are better off than any other class except those with unreduced salaries.

The defeat of the Reilly Funding bill greatly rejoiced us. Now we are watching the Cigarette bill which has passed the State Senate.

Pierce storms and floods and fiercer cold have passed us by in this land of prophecy where the "tree of the field shall yield her fruit and the earth her increase and they shall be safe in their land and shall know that I am the Lord." I sometimes doubt if we know the Lord or our duty when I pass on the Sabbath the open saloons with groups of hired men and thoughtless youths about their doors, where tobacco squirts and oaths sully the purity of life. Will not all of the subordinate granges in the State unite with all good citizens in petitions for Sunday closing of these sin mills that turn out tramps and fill our asylums with wrecks of men fallen from their high estate?

Brushing up for "inspection" began Saturday with us. We are "tarnal awkward," but we'll be in line when the inspector's gavel falls.

A. A.

### Good Grange Day at Lockeford.

M. T. N. of Stockton writes to report the doings at Lockeford on the 2d inst., to which all the Patrons of San Joaquin county were invited. Past S. L. Huffman was to have been the installing officer, but was detained, and the ceremonies were conducted by Mr. Noyes of Stockton, assisted by his good wife. Master, G. A. Foster; overseer, Sister May Wakefield; lecturer, Sister C. H. Jones; steward, J. H. Pope; assistant steward, Sister G. A. Foster; chaplain, Sister S. L. Locke; treasurer, Sister R. Lower; secretary, Sister R. M. Montgomery; gate keeper, Sister J. H. Pope; Pomona, Sister Bertie Hall; Flora, Sister Maud Foster; Ceres, Sister O. Allen; lady assistant steward, Sister L. J. Locke; organist, Sister Allen. The ceremonies of installation were followed by a feast which was incomparable in its way, after which, our correspondent says:

Several of the prominent citizens of the vicinity came in and took part in discussing some of the leading questions of the day, such as the Nicaragua Canal, the currency question, Government ownership of railroads, etc. The worthy lecturer announced the following programme: Song, by the grange recitation, Sister Maud Foster; reading, Sister S. L. Locke; music, Sister McIntyre; recitation, Sister Bertie Hall; recitation, Sister G. A. Foster; concert recitation, Brother and Sister Noyes; song, Sisters L. J. Locke and McLean. The day was thoroughly enjoyed by all, and will live long in our memories. With such efficient and genial officers and members, Lockeford Grange cannot fail to have a bright future.

From Grimes Grange.

Grimes, Colusa Co., Feb. 11, 1895.

To THE EDITOR:—On the 2d of February Grimes Grange had installation of officers, followed by a feast. It was largely attended by the sisters, but,

being busy times, not many brothers were present. The following officers were installed by W. W. Kilgore, past master: Master, G. Beckley; Overseer, H. Baldson; Lecturer, Mrs. W. W. Kilgore; Steward, Mrs. L. Dixon; Ass't Steward, F. Kilgore; Chaplain, Mrs. L. Beckley; Treasurer, Mrs. A. Caldwell; Secretary, J. M. Dixon; Gatekeeper, H. Strother; Pomona, Miss Nettie Howell; Flora, Miss Eliza Ross; Ceres, Miss Iona George; Lady Assistant Steward, Mrs. Gleason.

W. W. KILGORE.

### Notes.

At its last meeting Sacramento Grange adopted resolutions of respect for the memory of its late sister, Mrs. A. M. Basler. The memorial committee reporting the resolutions was composed of Mrs. F. A. Burke, Miss N. Sims and Mrs. E. Lander.

The inspection system will soon be in operation, and the officers of subordinate granges will do well to brush themselves up in the work.

STATE OF OHIO, CITY OF TOLEDO, ss,  
LUCAS COUNTY.

FRANK J. CHENEY makes oath that he is the senior partner of the firm of F. J. CHENEY & Co., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of HALL'S CATARRH CURE.

FRANK J. CHENEY.

Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1886.

{SEAL}

A. W. GLEASON.

Notary Public.

Hall's Catarrh Cure is taken internally and acts directly upon the blood and mucous surfaces of the system. Send for testimonials, free.

F. J. CHENEY & CO., Toledo, O.  
Sold by Druggists, 75c.

## ASTHMA,

Distressing Cough,

SORE JOINTS

—AND—

MUSCLES.

Despaired

OF RELIEF.

CURED BY

**Ayer's Cherry Pectoral**



"Some time since, I had a severe attack of asthma, accompanied with a distressing cough and a general soreness of the joints and muscles. I consulted physicians and tried various remedies, but without getting any relief, until I despaired of ever being well again. Finally, I took Ayer's Cherry Pectoral, and in a very short time, was entirely cured. I can, therefore, cordially and confidently commend this medicine to all."—J. ROSELLS, Victoria, Texas.

"My wife had a very troublesome cough. She used Ayer's Cherry Pectoral and procured immediate relief."—G. H. PODRICK, Humphreys, Ga.

**Ayer's Cherry Pectoral**

Received Highest Awards

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**5/A** MAKE THE STRONGEST.  
Made in 250 Styles.  
For either road or stable use.  
All shapes, sizes and qualities.  
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**LIGHTNING WELL MACHINERY Works.**  
All kinds of tools. Fortune for the driller by using our Adamantine process; can take a core. Perfected Economical Artesian Pumping like to work by Steam, Air, etc. Let us help you. THE AMERICAN WELL WORKS, Aurora, Ill.; Chicago, Ill.; Dallas, Tex.

## Seeds, Plants, Etc. Walnut Trees.



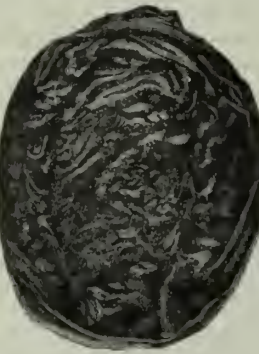
### Grenoble or Mayette Walnut.

The most complete collection of Walnuts to be found anywhere: 23 varieties, including the Mayette or Grenoble, Franquette, Parisienne, Chaberte, and Vourey, the leading market walnuts of France, all first grade, second generation seedling trees, the only class of seedlings worth planting, of all the above-named varieties, besides Proportiens and Cluster. Also grafted trees.

### New Varieties of Prunes!

## "Clairac Mammoth" D'Ente!

Or Improved French Prune.



Average Size (Cured).

The finest and largest prune ever introduced into this State, grading (cured) from 20 to 35 per pound; splendid to ship East as a plum. This season is the first one that this remarkable prune has been put on the market.

Everything else in the nut and fruit tree line. General Catalogue, with essay on Grafting the Walnut, and how to redeem by grafting large, unproductive and defective walnut trees, with cuts, 10 cts. per copy.

Supplement, with Price List for the season of 1894-95, sent free on application. This supplement contains a full description of the "Clairac Mammoth."

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BERRIES AND OTHER PLANTS, In the State, at the Home Nurseries, Pasadena, Cal.

One and two-year-old Orange and Lemon Trees, the finest and thriftiest stock ever grown anywhere, and all the best varieties, also Pomelo (Grape Fruit), and the Japanese Red Dancy Tangerine Orange; also the best deciduous trees, Raspberries, Blackberries and the Wonderful Everbearing and other fine varieties of Strawberries. Nothing but the best of all varieties of Fruits and Nuts. Don't fail to write for prices to HEWITT & CORSON, Pro's, Pasadena, Cal.

## Cheap Fruit Trees!

APPLE SEEDLINGS, home grown, transplanting sizes, Nos. 2 and 3. Also large stock of FRENCH PRUNES, PEAR and CHERRY TREES. Write for prices.

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### 400,000 PRUNE, PLUM, PEACH, CHERRY AND PEAR TREES,

Four to six feet, for sale at out rates. No better trees in California. Terms and discounts satisfactory. Any trees not perfectly satisfactory return at our expense. Address

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A FINE LARGE STOCK, SECOND TO NONE.

All the best varieties in stock.

Petite on Peach, Tragedy, Clyman, Burbank Robe and Royal Ann in big surplus and very cheap. Address

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### FOR SALE!

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Alfalfa, Grass, Clover, Vegetable and Flower Seeds.—Onion Sets.

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FRENCH PRUNE, BARTLETT PEARS,

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First-Class Trees at very low prices.

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We gave the Violet its glorious name—"THE CALIFORNIA." We alone have supplied the market with its blooms  
And we now offer the **PLANTS** for sale.

**PRICES**—One, 20 cents; Six, 85 cents; Dozen, \$1.50; Hundred, \$7.50

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1895 Floral Wonder.

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Immense in size; stem 12 inches long. Intensely fragrant.  
Color Pure Violet Purple.

**A STERLING NOVELTY.** IT HAS CAPTURED THE SAN FRANCISCO MARKET. Last year a few thousand flowers were offered in San Francisco, and they were sold for TEN TIMES THE PRICE of Marie Louise and Russian.

Plant vigorous and absolutely free from disease. Does not fade out. Last season several hundred flowers were picked from a single plant.

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G. W. THISELL, Sr.

SACRAMENTO, Sept. 5, 1894.  
Mr. J. T. BOGUE, Tudor, Cal.—"In answer to your inquiry regarding the California Red Plum, we wish to state that from experience we have had with this Plum in the Eastern markets, the net results show that it is a very valuable Plum and we take pleasure in recommending same, believing that it is one of the best shipping and selling Plums that has ever been discovered for California shippers." Yours truly,  
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Write us if you want Med. Sweets or Wash. Navels; we can give you lower prices for good trees than any one.

Cal. Fan and Cham. Excelsa Palms, Laurustinus, Dracaena Indivisa, Roses, Tuberoses, Etc., Etc.

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220 Market St., San Francisco, Cal.



### Woman Suffrage.

We was settin' by the fireside an' a talkin',  
ma and I,  
While ma's fingers they was busy pealin' ap-  
ples for a pie.  
We was talkin' 'bout a lecture by a woman  
t'other night,  
In the which she said that votin' was a wo-  
man's nat'ral right.

And she said as how sassiety would never git  
quite straight,  
Until woman had a hand and voice in manag-  
ing the State;  
For she reckoned that the gov'ment wasn't  
any wuss to steer  
Than the ev'rage sort of husband that she'd  
managed year by year.

And she said she'd seen a man so drunk he  
couldn't walk or stand,  
A led up to do his votin' with a ballot in his  
hand;  
And he couldn't even tell his name or guess  
where he was at;  
And she kinder thought most women folks  
could do as well as that.

Then she said there's lots of furriners that  
comes across the sea,  
That about our institutions hasn't got the  
least idee.  
Before they come they think our streets is  
piled knee deep with money,  
And that our brooks is runnin' milk, our  
rivers flowin' honey.

Then there's them that comes with dynamite  
to blow us all away,  
An' they're goin' to show us Yankees how to  
run this thing, they say.  
So we set 'em right to votin', and, just as we  
might expect,  
We can look around most anywhere an' wit-  
ness the effect.

Some can't even talk our language, but I'm  
sure that every man  
Without any hesitation, will admit that wo-  
men can;  
When it comes to influencin' men to get out  
to the polls,  
And to tend up to their duty, can't we do it,  
bless your souls?

And she said there wasn't many women fools  
enough to rare if  
Some one made an observation 'bout free  
tradin' or the tariff,  
And they didn't care a copper whether Lily  
O. Kulanner  
Dined on missionary tenderline, or thumped  
on the pianer.

But she said the biggest reason why they  
couldn't vote, of course,  
Was that gov'ments are founded upon mili-  
tary force.  
And while woman has undoubted grace, ac-  
complishments and charms,  
Yet she isn't jest quite suited for the task of  
bearin' arms.

And I thought that was a poser, but it wasn't,  
for she said  
That this bay'net, brute-force the'ry was all  
busted up and dead,  
And because men was the strongest, and  
could lift more, and all that,  
Why it didn't allers foller he'd got more in-  
side his hat.

And it takes more brains to coax a man to buy  
his wife a bonnet,  
Than it does to lay out a new road, or 'sess  
the taxes on it.  
And she said that gals with grit enough to  
teach wild deestrick skules,  
Ought to run a caueus 'greeable to parly-  
mentary rules.

And she said if holdin' offices, and all that  
sort of thing,  
Was dependin' upon muscle, why then we  
should form a ring,  
Set the candidates a bruisin', standin' by to  
see it out,  
And the one that licked the other was best  
qualified, no doubt.

Her idea, she said, of fitness, was inteller-  
gence and mind,  
All of which, she said, to some extent was  
found in womankind.  
And because some women didn't care for  
nothin' else but style,  
Wa'n't no sign but what there was one with  
some sense once in a while.

And the way to fix a woman's intellect in  
higher things  
Than her clothes and millinery, high-heel  
boots and diamond rings,  
Was to open up the ay'nues leadin' out to  
broader themes,  
Where she'd have a chance to realize some of  
her ambitious dreams.

And she didn't believe that women would  
neglect their own affairs,  
Sech as dustin' off the furniture or sweepin'  
down the stairs,  
If she went out once a year and dropped a  
piece of paper in  
To the ballot box on votin' days, 'bout which  
there's so much din.

Well, says I, hit might be jestice, arter all,  
that womaukind,  
When we tax 'em same as men folks, should  
like men folks 'spress their mind.  
Though I ain't dead sot agin it, lettin' women  
go and vote,  
'Twould seem queer to have for gov'nor one  
who wore a petticoat.

But I s'pose we'd git used to it; there's our  
cousins erost the sea,  
They have had a female gov'nor now for half  
a century;  
And they'd rather have Victori', if there's  
truth in half their tales,  
Than they would to have her oldest son, they  
call the Prince of Wales.

Then I asked ma what she thought about it.  
In her quiet way  
She said: "If women want to vote, why let  
'em vote, I say,  
For I know that things is different now from  
what they used to be.  
As for politics and votin', why they never  
trouble me.

"For I wasn't brought up that way; but  
that's no reason why  
I should want to make all women think and  
do the same as I.  
And," says ma, "it's my opinion, if all women  
vote that will,  
Every one that's a true woman, will be jest a  
woman still."

Milo Leon Morton.

### Seeds, Plants, Etc.



### New Chrysanthemum Seed

These charming new types of Chrysanthemum from Japan bloom the first year from seed. They embrace all styles, varieties and colors, including the exquisite new Ozark Flax type, Rosettes, Globes, Fimbriated, Miniature and Mammoth. Sow the seed this spring and the plants will bloom profusely this fall, either in pots or in the garden. From a packet of this seed one may have a most magnificent show of rare beauties. Price 25c. per pkt. or FOR ONLY 50c. WE WILL MAIL ALL OF THE FOLLOWING:

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- 1 pkt. GIANT WHITE SPIDER FLOWER, new.
- 1 pkt. JAPANESE WINEBERRY, king of berries.
- 1 pkt. NEW SPOON GOURD, curious and useful.
- 5 bulbs NAMED GLADIOLUS, 1 each of White, Pink, Scarlet, Yellow and Variegated.
- 3 bulbs MAMMOTH OXALIS, different colors.
- 1 bulb VARIATED TUBEROSE, Orange flowers.
- 1 bulb ZEPHYR FLOWER, a perfect fairy-like gem, and our GREAT CATALOGUE with 9 magnificent colored plates and covers, and sample copy of the MAY FLOWER with two great chromo plates. These 5 packets of seed Novelties and 10 choice bulbs (worth \$1.35) will all flower this season, and we send them for 30 CENTS only to introduce our superior stock. 4 collections for \$1.00. Catalogue will not be sent unless asked for, as you may already have it.

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Send us the names of 5 or 10 of your neighbors who love flowers and we will add a fine Novelties, FREE.

**OUR CATALOGUE** Seeds, Bulbs, Plants and Rare new Fruits is the finest ever issued; profusely illustrated with elegant cuts and colored plates. We offer the choicest standard sorts and finest Novelties. We are headquarters for all that is New, Rare and Beautiful. This elegant Catalogue will be sent for 20c. or FREE if you order the articles here offered.

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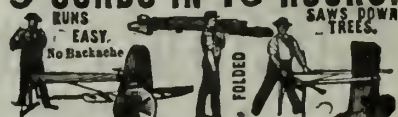
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## S. F. MARKET REPORT.

## Market Review.

**FLOUR**—The demand at the moment is largely on local account. Prices have been reduced all round. We quote: Net cash prices for Family Extras, \$3 25@3 35 per bbl; Bakers' Extras, \$3 15@3 25; Superfine, \$1 75@2 15 per bbl.

**WHEAT**—The market is quiet and easy, the situation being anything but satisfactory to the producing element. Offerings are somewhat limited, but they are equal to immediate requirements, as shippers are not disposed to buy much ahead in the present condition of distant centers. Dealers quote the top price for choice product. Possibly a round lot would bring a trifling advance, as cargo lots are better handled than small parcels. We quote: Milling Wheat, 87½@92½¢ per cwt. Walla Walla Wheat is quotable at 75¢ for fair average quality, 77½@80¢ for bluestem and 87½¢ for damp.

**BARLEY**—Prices have been softening for several days, and a very low basis has now been reached. The demand is quite slim and the market drags badly, especially for feed descriptions. Brewing qualities are only in moderate supply, though ample for all present needs. We quote: Feed, fair to good, 72½@75¢; choice, 76½¢; Brewing, 85@90¢ per cwt.

**OATS**—Business is slow and unsatisfactory. Arrivals are light, but custom is too small to make any perceptible inroads on stocks. Prices remain stationary, with the tendency at the moment against sellers. We quote: Milling, \$1 05@1 15; Surprise, \$1 05@1 15; fancy feed, \$1 05; good to choice, 95¢@1 05; fair to good, 90¢@95¢; poor to fair, 82½@87½¢; Black, \$1 15@1 30; Red, \$1 05@1 17½; Gray, 96½@97½¢ per cwt.

**CORN**—Demand light, while the absence of any pressure to sell keeps prices in position. We quote: Large Yellow, \$1 22½@1 25; small Yellow, \$1 25@1 30; White, \$1 20@1 22½¢ per cwt.

**HAY**—Trade is rather slow, with prices easy. Wire-bound Hay sells at \$1 per ton less than rope-bound Hay. Following are the wholesale city prices for rope-bound Hay: Wheat, \$8@11; Alfalfa, \$8@10; Barley, \$8@10; Clover, \$9@10; compressed, \$8 50@11; Stock, \$8@10 per ton.

**STRAW**—Quotable at 70¢@80¢ per bale.

**FEED**—Manhattan Horse Food (Red Ball Brand) in 100-lb. cabinets, \$8; Manhattan Egg Food, 100-lb. bags, \$11 50.

**SEEDS**—Mustard and Alfalfa are both in fair supply, without any positive demand. We quote as follows: Mustard, Brown, \$1 50@1 75; Yellow, \$2@2 37½; Trieste, \$1 75@2 20; Canary, 30¢; Hemp, 32½@44¢; Rape, 13½@24¢; Timothy, 54¢@61¢; Alfalfa, 74¢@74¢ per lb; Flux, \$2 25@2 50 per cwt.

**POTATOES**—The market is well stocked with the several descriptions. We quote as follows: New Potatoes, 2¢@2½¢ per lb; Early Rose, 40¢@45¢; River Reds, 20¢@30¢; Burbanks, 30¢@40¢; Oregon Burbanks, 10¢@35¢; Salinas Burbanks, 75¢@81¢; Sweets, 50¢@75¢ for Rivers and \$1 25@1 50 per cwt for choice stock.

**ONIONS**—Stocks none too large. Quotable at 80¢@1 per cwt.

**BEANS**—Market not active. White are held with fair steadiness, but easy tone prevails in prices of colored descriptions. We quote as follows: Bayos, \$1 75@1 90; Butter, \$1 75@1 80 for small and \$2@2 25 for large; Pink, \$1 10@1 35; Red, \$1 60@1 65; Lima, \$4 10@4 25; Pea, \$2 25@2 50; Small White, \$2 25@2 55; Large White, \$2 10@2 30; Blackeye, \$2 75@3; Red Kidney, \$2 75@3; Horse, \$1 60@1 70 per cwt.

**FRESH FRUIT**—Offerings of Apples are of good proportions, but strictly choice stock is none too plentiful, and full figures are obtained for goods of such character. Ordinary qualities, on the contrary, are slow and easy. We quote: Apples, 40¢@1 per box, with \$1 25 for fancy.

**CITRUS FRUIT**—The prevailing damp weather is not favorable for the sale of Oranges. Quotations for Mexican Limes are higher, being scarce. The Panama steamer now due is expected to bring up fresh consignments, in which event prices are likely to fall back again. California Navels, \$1 50@2 50; Seedlings, \$1@1 75 per box; Sonora Oranges, \$1 25@1 50 per box; Mexican Limes, \$5@6 per box; California Limes, in small boxes, 50¢@75¢ per box; Lemons, Sicily, \$3 50@4; California Lemons, 75¢@1 25 for common and \$1 50@2 50 for good to choice.

**DRIED FRUIT**—Quite a liberal quantity was shipped to the colonies by the Australian steamer which left last Saturday. Trade generally is rather slow, but stocks are light and there is no great pressure to sell. The market shows healthy tone.

Following are the prices furnished by the Fruit Exchange. The figures presented represent carload lots, small parcels occasionally selling at slightly lower rates:

Apricots—Fancy Moorpark, 8½¢; choice, do, 8¢; fancy, 7½¢; choice, 7¢; standard, 6½¢; prime, 6¢.

Apples—Evaporated, 5½¢@7¢; sun-dried, 4¢@5¢.

Peaches—Fancy, 6½¢; choice, 6¢; standard, 5½¢; prime, 54¢; peeled, in boxes, 12¢@13¢.

Pears—Fancy, halves, 5½¢; quarters, 4½¢; choice, 4½¢; standard, 3½¢; prime, 3¢.

Plums—Pitted, 4¢@5¢; unpitted, 1½¢@2¢.

Prunes—Four sizes, 4½¢@4¢.

Nectarines—Fancy, 7¢; choice, 6½¢; standard, 6¢; prime, 5½¢.

Pigs—White, choice, 5¢@5½¢; Black, choice, 1½¢@2¢.

Raisins—In sacks (50-lb. boxes) selling at 14¢ per lb. higher: 4-crown, loose, 4¢; 3-crown, 2½¢; 2-crown, 2¢; seedless Sultanias, 3¢; seedless Muscates, 2¢ per lb; 3-crown London Layers, \$1 25 per box in 20-lb. boxes; clusters, \$1 50; Dehesa clusters, \$2; Imperial clusters, \$3; 4-crown, loose, \$1 15; 4-crown, loose, faced, \$1 25 per box.

Dried Grapes—1½¢ per lb.

**NUTS**—Trade is about as active as might be expected at this season of the year. We quote as follows: Chestnuts, 7¢@8¢; Walnuts, 5¢@7¢ for hard shell, 7¢@9¢ for soft shell, and 7¢@9¢ for paper shell; Almonds, 5¢@7½¢ for hard shell and 8¢@10¢ for paper shell; Pecans, 1½¢@6¢; Hickory Nuts, 5¢@6¢; Filberts, 8¢@9¢; Pecans, 6¢ for rough and 8¢ for polished; Brazil Nuts, 7¢@8¢ per lb; Cocoa nuts, 5¢@5 50 per 100.

**HONEY**—No change in the situation. Offerings are light, while the inquiry is nominal. We quote as follows: Comb, 10¢@12¢; water white extracted, 7¢@7½¢; light amber extracted, 5½¢@6¢; dark amber, 4½¢@5¢ per lb.

**BUTTER**—Supplies continue large, being in excess of the demand, so that the market still shapes in favor of the consumers. We quote as follows: Fancy creamery, 18¢@20¢; fancy dairy, 14½¢@16¢; good to choice, 12½¢@14¢; fair, 10¢@12¢; store lots, 9¢@10¢.

**CHEESE**—Nothing of interest to note. Supply and demand well balanced. We quote: Choice to fancy, 8¢@9¢; fair to good, 6¢@7¢; Eastern, ordinary to fine, 11¢@14¢ per lb.

**EGGS**—There is a steady tone to the market,

as stocks of store Eggs are cleaning up well. We quote: California Ranch, 19¢@20¢; store lots, 17½¢@18½¢ per dozen.

**POULTRY**—The market is badly handicapped with heavy offerings. Four cars of Eastern Poultry have arrived this week, causing weakness in quotations all round. We quote as follows: Live Turkeys—Gobblers, 8¢@9¢; Hens, 9¢@10¢ per lb; dressed Turkeys, 10¢@12¢ per lb; Roosters, \$3@3 50 for old, and \$4@5 for young; Broilers, \$3@4 for small and \$4@4 50 for large; Fryers, \$4 50@5; Hens, \$3@4; Ducks, \$1 50@5 50; Geese, \$1 50@1 75 per pair; Pigeons, \$1 50@1 75 for old and \$2@2 25 per dozen for young.

**WOOL**—Market dull and likely to keep so until the opening of the spring season. We quote fall: Free Northern, 7¢@8½¢; Northern, defective, 5¢@7¢; Southern & San Joaquin, light and free, 5¢@6¢; do, defective, 3¢@4¢.

**HOPS**—Quotable at 4¢@7½¢ per lb, as extremes for poor to choice. Offerings as a rule are not strictly choice, and buyers want none but first-class stock, so that trade is very dull.

## List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING JANUARY 29, 1895.

- 533,344.—VEHICLE SPRING—A. W. Burdick, Fresno, Cal.  
533,056.—SCAFFOLD—Cruson & Dobkins, Lebanon, Ogn.  
533,168.—LAMP STOVE—Furrey & Hellman, Los Angeles, Cal.  
533,124.—SAWMILL OFFSET—D. B. Hanson, S. F.  
533,195.—DENTIST'S TOOL—A. P. Hays, Los Angeles, Cal.  
533,367.—SPRAY NOZZLE—J. McBoyle, Oakland, Cal.  
533,142.—TELEPHONE—Sabin & Hampton, S. F.  
533,400.—AIR INJECTOR—J. W. Stanley, Oakland, Cal.  
533,380.—SEWING MACHINE—G. W. Stewart, Chelalis, Wash.  
533,102.—GAME—Mary Thomson, Los Angeles, Cal.  
23,962.—DESIGN—PIN HOLDER—E. H. Ellis, Pasadena, Cal.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained and general patent business for Pacific Coast Inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

## \$300 DOLLARS FOR A NAME.

This is the sum we hear the Salzer Seed Co. offer for a suitable name for their wonderful new oats. The United States Department of Agriculture says Salzer's oats is the best of 300 varieties tested. A great many farmers report a test yield of 200 bushels per acre last year, and are sure this can be grown and even more during 1895. Another farmer writes us he cropped 112 bushels of Salzer's Marvel Spring wheat on two and one-half acres. At such yield wheat pays at 30¢ per bushel. One thing we know, and that is that Salzer is the largest Farm Seed grower in the world, and sells potatoes at \$2.50 per barrel.

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## Announcement!

## FRUIT GROWERS AND NURSERYMEN.

Having sold my business, known as Napa Valley Nurseries, I respectfully solicit for my successors a continuance of the patronage with which I have been so generously favored for the past 15 years.

LEONARD COATES.

## NAPA VALLEY NURSERY CO.

Successors to Leonard Coates.

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We are closing out our stock of Dairy Machinery, consisting of Churns, Curd Mills, Vats, Butter Workers, Shipping Cans, Rennet, Cheese and Butter Color, etc. Also, Spare Parts of Sharples Separators, all sizes. This is a square offer and will hold good for Thirty Days. We want the room occupied by these goods for machine work. The entire stock is first class, and of the latest and best makes.

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## California Inventors

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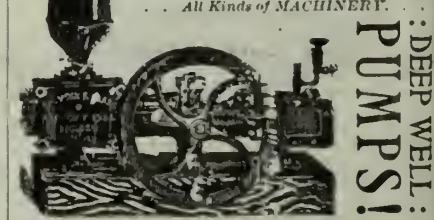
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Made entirely of cast steel and wrought iron—PRACTICALLY INDESTRUCTIBLE.  
Cheapest Riding Harrow on Earth.  
Sells for about the same as an ordinary drag.

An extensive fruit grower in Fresno County says:—"The 'ACME' Harrow has the past season in our orchard proved that it is the 'boss' of all. Candidly we are convinced that it saved our orchards in the past dry season by placing the surface in good order which answered as a mulch and retained what moisture fell during the winter and spring of 1894. We can show a growth on apple trees this dry season of 7 feet and over. We only had 2½ inches of rain to produce this growth. We did this, we believe, by the use of the 'ACME' Harrow, and cheerfully recommend it in preference to any tool made for a cultivator."

N. B.—I deliver free on board at PORTLAND and SAN FRANCISCO.  
DUANE H. NASH, Sole Manufacturer, MILLINGTON, N. J. and 30 South Canal Street, CHICAGO, ILL.  
(Mention This Paper.)



SECRETARY HERBERT will ask Congress for authority to transfer to the Interior Department all the wooded lands not needed for naval purposes. Live oak timber was once the chief material employed for our warships, and to insure a supply of it the government set apart large tracts covered with trees in some of the Southern States. In these days of steel hulls the need of this provision has ceased, and, in fact, there are now lying at the various navy yards thousands of feet of seasoned live oak that can neither be used or sold. Naturally, the Navy Department long ago ceased to concern itself with watching its live oak tracts, and there is no evidence to show that trespassers and squatters take advantage of this fact, while in some cases the reservations may obstruct settlement.

#### The Red Ball Brand.

That "Manhattan Food" for stock and poultry has become the standard health and tonic food on this coast, as well as in the East, is attested by the steadily increasing demand for it and the favorable testimonials from many sources. During the wet and cold season is a good time to try its merits for increasing the egg product and toning up horses and cattle. See the advertisement on another page.

#### Dairymen's Attention

Is called to the closing out sale advertisement of P. T. Taylor & Co., 523 Mission street. These dairy supply goods are the latest improved makes, and those in need of anything in this line will find bargains by giving the matter prompt investigation.

ALVAN G. CLARK, speaking of "The Making of Large Lenses," makes special reference to one forty inches in diameter that he is finishing. The polishing is done by hand, and Mr. Clark is reported to have said that the heat of the "hand" so distorted the focus of the lens by expansion that it required three hours to cool it sufficiently for testing.

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In referring to the advertisement on another page, of the "Acme" Pulverizing Harrow, Clod Crusher and Leveler, we call attention to the fact that the manufacturer, Duane H. Nash, Millington, N. J., and Chicago, Ill., offers to send these Harrows to responsible farmers, on trial, to be returned at his expense if not entirely satisfactory. The fact that the manufacturer has advertised in that way for many years back, and as he claims to have sent thousands of them out on trial, would seem to indicate unbounded confidence on his part, in the utility of the Harrow. It is claimed that this is the lowest price Riding Harrow on earth.

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If a creameryman wants to succeed he must get away from old ideas and old machinery. Our ancestors (some of them) made a living at dairying. We want to make something more than a living. Our ancestors did not have improved machinery. We have

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It makes money by its little savings. It saves the butter fat others waste. It saves the oil and repairs required by others. It saves much time, and it saves much fuel.

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And now a word or two in regard to dairy schools. Five years ago we were troubled as a community by the creamery promoter sharks; now we are afflicted by the dairy school shark. There are just about two good dairy schools in this country and about two dozen of the other kind. A prospective purchaser of a separator wants to steer clear of all of them, try his machine and form his own judgment and let it be his guide. If his judgment is not better than that of the average dairy school professor his abilities are not of a sufficiently high order to make a success as a creameryman.

Send for circulars and please mention this paper.

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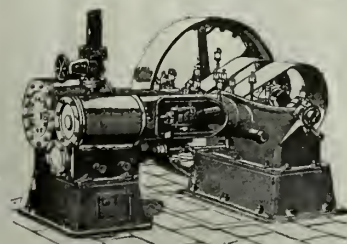
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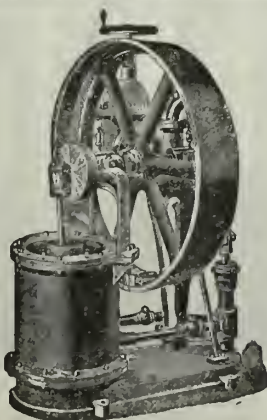
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But be sure and hitch him to the

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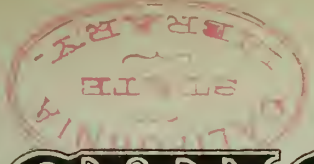
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# THE PACIFIC RURAL PRESS

AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 8.

SAN FRANCISCO, SATURDAY, FEBRUARY 23, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

## Scenic Gardening in California.

It is almost trite to say that California conditions are splendidly adapted to the most gratifying results in ornamental horticulture. This fact is most obvious to any expert who reads a list of plants hardy in this region. It is also clear to any appreciative person, be he unskilled in plants, who notes for a moment the wide range of hues and forms which can be seen wherever any attempt has been made to indulge in ornamentals. Our conditions lie in that most happy climatic region known as the sub-tropical, or semi-tropical, where, without losing the charm of the characteristic vegetation of the temperate zone, we add to it a wealth of new forms and colors from the borders of the strictly tropical region and we draw from even beneath the equator itself plants which thrive there upon certain elevations. It is true, of course, that California cannot afford a home for plants which thrive only in the humid heat of the tropical coasts, but we have little reason to mourn our limitations in this respect. We gain more from our affiliation with ordinary temperate

loss. And while this is true, how little do we ordinarily see which exhibits our appreciation of our peerless adaptations. It is true that here and there in public or private grounds there has been due regard for the

for selection of plants nor the arrangement of them. Some of our public grounds are as scant of variety as though they were in Alaska, and as stiff and ridiculous in arrangement and trimming as though taste and tone of the beautiful had no part nor lot with us. It is true we have, as a rule, given very little attention to this matter. We have been too busy in industrial affairs to regard the esthetic, but the better time, from a humanitarian point of view, is coming, and we shall then have ornamental horticulture in all parts of the State, locally adapted to ruling conditions and as grand in its way as our industrial achievements now are.

Looking toward this time, and as continual reminders to our readers to do what in them lies toward the upbuilding of our resources, public and private, of true scenic gardening, we give views calculated to inspire appreciation of the beautiful in these lines and effort toward it. The two pictures upon this page are taken from the collection of the Sunset Seed and Plant Co., of this city—an incorporation which is certainly doing much to advance the general interest in fine plants and trees, and fitting



ADORNMENT OF APPROACH TO CALIFORNIA RESIDENCE.



A TASTEFUL ADORNMENT OF STREAM SIDE IN PUBLIC OR PRIVATE GROUNDS.

latitudes than we can possibly lose by our unfitness for plants from tropical jungles. We cannot have, of course, tropical exuberance, but sub-tropical vigor and grace are more than compensation for its

acquisition of the most beautiful trees and shrubs, and the most fitting association of them to propose congruous and really beautiful scenic effects; but how often in plantations no regard has been paid at all

use of them. The upper view is a plan of approach to the residence, using grand old native trees, which are fortunately on the ground, and supplementing

(Continued on page 116.)



## PACIFIC RURAL PRESS.

Office, No. 220 Market St.; Eleventh, No. 12 Front St., San Francisco, Cal.

All subscribers paying \$3 in advance will receive 15 months' (one year and 13 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance five months.

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Any subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

Our latest forms go to press Wednesday evening.

Chicago Office ..... CHAS. D. SPALDING, 320, 189 La Salle St.

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ALFRED HOLMAN ..... Editor.  
E. J. WICKSON ..... Special Contributor.

San Francisco, February 23, 1895.

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## The Week.

**Weather and Crops.** We have had a week of the most glorious weather, just what is now most desired to bring grain and grasses out of the dullness of excessive moisture and into the brilliant verdure of active growth. A vast amount of work has been done during the last week, and the country is beginning to assume everywhere an aspect which betokens readiness for the growth which such weather invites. Fruit blossoms have generally appeared, and signs of the advancing season are everywhere in forest and farm. While California is thus reveling in sunshine another blizzard has whisked its tail over the Gulf States and has brought again experiences which beat the records. Last Friday the worst snowstorm in the memory of the present generation prevailed throughout Georgia. In Atlanta it fell heavily from early morning and the ground was soon covered with five inches of snow on four inches of the frozen remains of the previous Sunday night's storm. At Darien, on the coast, the ground is covered with snow four inches deep. This is the first time in the history of this ancient town that such a thing has happened. Twenty years ago there was a fall of snow, but it was gone in two hours. There has never been such a severe spell of weather as has been experienced for the last two weeks. All the orange trees and early vegetables are killed. We have not seen accounts of Florida's experience with this latest storm, but we imagine it could add but little to the losses previously incurred, as no interval intervened of sufficient length to grow more tender stuff in the place of that which was wiped out before.

**Crushed Rock from Folsom.** The proposition to furnish rock crushed by State water power and convict labor at the Folsom prison to counties which will pay the bare cost of crushing and transportation seems to be a taking one. Gen. Roy Stone, the Government expert on roads, whose visit to California has already been mentioned in our columns, has given the matter much research, and he concludes from all he could learn and what he had seen that within the area bounded by 150 miles around Sacramento, stone roads can be built for from \$800 to \$1000 a mile instead of from \$3000 to \$5000, as has been supposed. It could be done by utilizing convict labor to prepare road metal at and near the prisons without cost to the State above the original cost of a crushing plant and the application of power. The State owns unlimited quantities of fine trap rock at Folsom. It has idle convict labor, idle power surpassed by no other in the Union perhaps excepting one place. Finding that the rock can be crushed at a cost of about twenty cents without outlay by the State or a cent of new taxation for the work, and

furnished to the people at that cost, he had, by request, advised with transportation officials, and felt able to say that arrangements could be made with the railroads to haul the road metal at cost of haul if the State will furnish it at cost of production and the people will haul it from delivery depots. A community, he said, that would not do this did not deserve the blessings of good roads, which in New Jersey and Canandagua had made the people prosperous in the midst of hard times. He believed the transportation arrangements could be made to extend to counties setting up their own crushers, and thus the larger portion of the State have immediate benefit.

## Freights on Fruit.

The Railway Commission, at the instance of an Assembly resolution, has taken up an inquiry into the cost of freighting fruits to the Eastern markets. Fruit growers have been firmly convinced of late that this service has cost them too much and that there have been rebates to all parties but the growers. The issue is a very important one and the Railway Commission should get to the bottom of it. As a beginning we have a letter from Mr. Stubbs to the Commission, from which we take the following statements:

The through rates for green fruits in earloads, minimum weight per car 20,000 pounds for ventilated cars and 24,000 pounds for refrigerator cars, are:

|                           | TO CHICAGO.                        |  |
|---------------------------|------------------------------------|--|
| In ventilator cars.....   | \$1 25 per 100 pounds              |  |
| In refrigerator cars..... | \$1 25 per 100 pounds              |  |
|                           | TO NEW YORK, JERSEY CITY DELIVERY. |  |
| In ventilator cars.....   | \$1 50 per 100 pounds              |  |
| In refrigerator cars..... | \$1 50 per 100 pounds              |  |

The foregoing is for freight train service. The time from Sacramento to Chicago for ventilated cars five days; for refrigerator cars, eight days.

By passenger train the rates to Chicago are: For ventilators, \$2.25 per 100 pounds; for refrigerator cars, \$2.50 per 100 pounds.

The freight train to Chicago, which above is placed at five days for ventilated cars, is what we undertook to make during the season of 1894, but were interrupted by the strike. The time made ranged for both ventilators and refrigerators from eight to twelve days. We believe, however, that a live days' schedule for ventilator cars can be accomplished. The eight days' time for refrigerators is all that is necessary and the best that can be done with such heavy cars required to stop en route for icing.

With the refrigeration the railroad companies have nothing whatever to do. Shippers contract with the owners or lessees of the refrigerated cars for this service, and the standard charge, as I am informed, for this service, which includes cost of ice, has been as follows for freight train service:

| From—                                                  | To Chicago.     | To New York.    |
|--------------------------------------------------------|-----------------|-----------------|
| Sacramento and points East.....                        | \$1.25 per car. | \$1.75 per car. |
| Points on California Pacific and Western Division..... | 1.00 per car.   | 1.00 per car.   |
| Fresno and South and Marysville and North.....         | 1.50 per car.   | 2.00 per car.   |

For refrigeration by passenger train an additional charge of \$5 per car is made.

The refrigerator cars are owned by private parties and are used by the Southern Pacific Company under contract with owners. They are run empty westward. On this account and on account of their excessive weight the Southern Pacific Company pays no rental for their use and charges the refrigerator-car companies 25 per cent in addition to its share of the through rate in consideration of hauling the excess weight. This amounts to 11 1/2 cents per hundred pounds for Chicago destination.

At present we believe that for the hardy fruits, with a five-day schedule to Chicago, ventilator cars offer the very cheapest and best method of transportation, and our best endeavors will be put forth to make the five-day schedule. For delicate and fully ripe fruits, unquestionably the experience of the past proves that refrigeration by ice is the best method so far determined, but the latter is very expensive both to the carrier and to the shipper. In our judgment the charges for refrigeration have been too great, affording the refrigerator companies a profit entirely out of proportion to the investment and service, but this is simply an opinion, and possibly does not take into full consideration the interests of the refrigerator-car companies.

It will be seen that Mr. Stubbs thinks possibly the refrigerator-car owners make too much. Others are of the same opinion, and perhaps they do not have the same kind regard for the owners as to think they may be mistaken. It would be very important for the Commission to ascertain who the owners of these greedy cars are. If they are smart enough to get more than their share of what the traffic will bear, the fruit growers will be disposed to help Mr. Stubbs to sit upon them. Also, if it should in any way prove to be a case of wicked partners, the fruit grower would like to know that.

## Arid Lands for the State.

At the meeting of the State Board of Trade there was also a proposition for the State of California to go into the arid land business, urged by John J. Flynn of Oregon. According to his statement the law provides that if a State or Territory shall expend \$3 an acre on such land in order to bring it under irrigation the United States Government will patent the reclaimed land to the amount of 1,000,000 acres to the State or Territory. Mr. Flynn said he was going before the Legislature in favor of action being taken, and a motion was passed by the State Board of Trade to ask the Legislature to adopt a resolution empowering the Governor to appoint a competent person to investigate the feasibility of the proposition and to report thereon to the Legislature at its session two years hence. This seems a fair proposition, providing the expert person does not cost too much. But why would it not be better for the State Surveyor General to report upon the subject? He should know best what sort of arid lands

are available and whether they would be worth their cost. After that comes the greater question as to whether the State needs more land at present and how the cost of securing it could be got back into the tax-payers' pockets.

## A Demand for Lower Fruit Rates.

As the RURAL goes to press on Wednesday the committee appointed by the Sacramento Convention of Fruit Growers last November are in conference with the railroad authorities. Their demands are for reduction in the rates on fresh fruit and expedition of the service. The committee—which is composed of H. Weinstock (chairman), Frank K. Buck, Douglas T. Fowler, H. B. Stabler, N. W. Motheral, G. D. Kellogg, B. F. Walton, General N. P. Chipman, Frank Kimball and J. Z. Anderson—has been collecting information for the past three months, and will be prepared to make a tremendous showing from the standpoint of the fruit-grower and shipper.

## Wheat Discussion.

On another page of this issue the reader will find the first installment of the reports by wheat growers to the State Board of Agriculture to which we alluded at length last week. These reports will be found to embody the points of interest which are mentioned in our preliminary statement. The reports will extend through several issues of the RURAL and these should be preserved for reference, as the interested reader will be often disposed to look back to the early statements in connection with the later. The various views which the writers will express of the means by which the agricultural outlook may be improved would keep a student of political economy busy for a year. The facts in the reports are of great moment; the opinions will be found very pertinent and suggestive and in some cases highly entertaining, to say the least.

## The Powers of Fruit Exchanges.

A dispatch from Riverside, dated Tuesday of this week, says: The Superior Court was occupied to-day with a suit brought by the Riverside Fruit Exchange against C. G. Atwood to compel him to carry out his contract and market his orange crop through the exchange. It is a test case, and upon its determination depends the power of the eight exchanges of southern California to force their agreement with the orange growers, by which the entire crop, with the exception of a small percentage, is now being marketed. Some days ago the exchange brought an action against Atwood to restrain him from disposing of his oranges to a fruit company. An injunction was issued and the crop placed in the hands of a receiver to-day. The case came before the Court on a demurrer, in which all the questions of the rights of the exchange were raised. William Collier, who appeared for Atwood, contended that the exchange contract is not mutual and could not be enforced against the defendant, because the latter was powerless to enforce it against the exchange. Atwood could not compel the exchange to handle his fruit, and so the exchange could not force Atwood to turn over his oranges. Collier argued that the exchange is only an agency, and the members can revoke its employment. On behalf of the exchange, E. B. Stanton caused something of a sensation by avowing that this is a trust and as such holds the property of the members. He did not, however, believe the Supreme Court would declare this trust illegal, for it is not in the restriction of trade. The case will be submitted on briefs, and, whichever way it is decided, an appeal will be taken to the Supreme Court.

## What Cows Are Doing.

So much discussion has been had in the RURAL during the last six months of the desirability of having cows which will conduct themselves generously at the pail that we presume many of our readers will be glad to put themselves in the way of obtaining the full record of the greatest cow test ever made in the world. The Department of Agriculture at Washington will probably soon publish the results of the dairy tests at the World's Fair, and as the edition is to be limited it will be well for our readers who desire it to apply at once to their Senators and Representatives in Congress for a copy of the work. The tests were most carefully made and are deeply interesting and significant. They should be on every dairyman's book shelves. Those who first apply at Washington are likely to be first served, and it is not likely that the supply will be adequate.

## Large Wine Deal.

The largest deal in the history of the wine industry in this country was effected on Tuesday of this week between the California Wine Makers' Corporation and the San Francisco Wine Dealers' Association. It includes the immediate purchase of 5,000,000 gallons at 12 1/2 cents per gallon and a contract to purchase the product controlled by the Wine Makers' corporation for the next three seasons—at a rate to be fixed. This transaction is understood to be a good thing for all parties, and it is promised that it will make better prices for the producer.

## Road Laws at Sacramento.

The Senate and Assembly Committees on Roads and Highways have had plenty to talk about this winter. They had something like thirty proposed road laws before them when the road convention met in Sacramento, and that body furnished them with eight or ten groups of propositions for their ap-



proval, as our report of the Road Convention last week showed. It is difficult to say how much of this quantity of proposed road legislation will get through, but it is said the committee is disposed to embody the points asked for by the convention in the enactment. It is also said that the committee will not modify the general plan of the present road law, except so far as the new propositions go; and these, it was thought, do not create issues upon which there will be much, if any, division of sentiment among supervisors or the people.

### Gleanings.

THE general catalogue of the Sunset Seed & Plant Co. (formerly Sherwood Hall Nursery Co.) for the season of 1895, just issued, is a marvel of completeness. All the novelties of the year in flowers, vegetables and fruits are listed at prices which bring them within popular view; and there is the usual complete list of standard garden and nursery stock. The catalogue, which is profusely and beautifully illustrated and valuable for its cultural directions, will be sent free upon application by letter to the Sunset Seed & Plant Co., 427-429 Sansome St., S. F.

THE Pomona Progress declares that the policy which the fruit exchanges say they intend to pursue in marketing the orange crop seems wise. They realize that the crop can be moved readily at good prices, but that the country is not in a condition to pay exorbitant prices for the fruit; and to demand higher prices than the trade will pay would stop the movement of the crop. The California oranges ought to go this year into many markets where they have never been sold before, bring the growers good prices and establish a reputation and market for the crop in coming years.

VACAVILLE Reporter: The first annual report of the Winters Fruit Exchange is exceptionally encouraging and satisfactory to its members. The association was organized about one year ago with Col. Sam Taylor as president and George Worth as secretary, and the following well-known gentlemen as directors: Ben Griffin, William Brinck, A. L. Stinson, Col. Sam Taylor, Arthur Smith, William Sims and George Worth. The Earl Fruit Company has been selected to handle the fruit in the East, at greatly reduced figures from what the shippers had been paying, besides a reduction of ten per cent on boxes and a large percentage on loading and handling the fruit. The secretary's report shows the organization to be in a healthy state, while only a few shares of the stock are not taken. By the experience of the past year's working, the association expects to be able to make improvements upon the past methods of doing business, and has nothing to fear in stating that the coming season will find that there has been a great saving of money by this timely organization.

ARCATA Union: There is a move among the farmers of Arcata bottom to establish a general merchandise store on the co-operative plan. The method, as we understand it, is to sell enough shares to raise the necessary capital, incorporate and buy the stock. The goods will be sold at the market price—that is, exactly the same as the other merchants sell. No credit will be given, and the goods must be paid for in exactly thirty days. At the end of a stated time, the proceeds will be figured up and the running expenses such as salaries of managers, rents, etc., will be paid. When that is deducted, the interest on the stock will be paid at the prevailing rate. When the interest has been paid, the remainder, if there be any, will be the profits, and this is to be divided among the purchasers in a novel manner. Every purchaser gets a ticket stating the amount of his purchase, and at the end of the period the profits are paid back to the purchasers in cash, the amount each receives depending on the size of his purchases and the amount of the profits.

A SAINT LOUIS dispatch, dated 14th inst., says: In the Circuit Court to-day Judge Dillon heard the case of Charles Gerher, who bought a carload of oranges at Santa Paula, Cal. His bill of lading called for the payment of \$262.50 freight, in accordance with the agreement of the freight agent at Santa Paula. They were shipped by the Southern Pacific and reached St. Louis by the Wabash. Here a freight bill for \$300 was presented. Gerher refused to pay it, but made an offer of \$262.50, and on its being refused he replevined the fruit. The goods were shipped in ice, but the bill of lading did not disclose the fact. At Ogden the mistake was discovered, and the bill of lading was corrected and the freight bill was raised from \$262.50 to \$300, oranges shipped in ice requiring the higher rate. The Wabash claims that, although the freight agent at Santa Paula made the rate on the oranges from that point to St. Louis, his contract does not bind the railroad companies, for the reason that these lines were working under the Interstate Commerce Act, and had filed their tariffs with the Interstate Commerce Commission, and since these tariffs had made the rate on oranges shipped in ice \$300 a carload, the agent had no authority to make a different rate. Judge Dillon took the matter under advisement.

OROVILLE Mercury: It is probably pretty well known by this time that most of the extensive deciduous fruit orchards along the Feather river are now under Chinese control. During the past few months leases and contracts have been signed whereby the Chinese will assume control of the orchards for various terms of years. The properties thus leased are among the most important planted to fruit in the country. In the past they have given employment during the summer season to many hundred men, women and children. In most cases these whites will be thrown out of employment and their places taken by Chinamen. When this occurs it is going to work a hardship on many poor but worthy families, and while we do not believe in anticipating danger until it is in sight, we believe that, when they see their positions taken by the coolies, there will be trouble. It is stated, now that the Chinese have secured control of the orchards, that they propose to erect large canning plants, to handle the surplus of the crop over the amount shipped. For this purpose a number of wealthy Chinese of San Francisco were in Oroville lately, looking over the field. If this is so, it is greatly to be deplored. It is certainly bad enough to have these orchards under Chinese control without having them erect a cannery which will employ several hundred Mongolians, to the exclusion of our own race. It is monopolizing an industry which is the principal support of a large section of the county. If it is true, it will cause much hardship and trouble.

### From an Independent Standpoint.

The past week has witnessed the practical breakdown of the Cleveland administration. In the House of Representatives, a bill embodying the President's latest financial suggestions was overwhelmingly rejected. In the Senate the circumstances of the latest bond issue have been the subject of severe criticism, in which Democrats have joined. Privately, leaders by whom the President has hitherto been warmly supported have declared against him. "The time has come," said Senator Mills of Texas on Saturday, "when Democrats must decide whether they will stand by Grover Cleveland or by their party. For myself I have decided to stand by the Democratic party." In any other parliamentary country all this would involve resignation of the ministry and a change in government; under our system it means simply that the administrative and legislative branches of the Government are at odds, and that for the present nothing will be done concerning the national finances. No matter how the country suffers it will have to stand it until President and Congress can agree. It means, practically, the abandonment of all attempts at financial legislation by the Democratic party and the reference of the whole question to the Republicans, who will control Congress after March 4th. There has been some talk of a special session of the new Congress to deal with the financial problem, but the recent action of the President would seem to indicate that it is his plan to keep the treasury supplied by the sale of bonds, allowing Congress to convene at its regularly appointed time next December.

Senator Mills' remark, quoted above, was made in connection with a discussion of the circumstances attending the bond issue of two years ago. It seems that the whole issue of \$62,000,000, running thirty years, drawing interest at  $3\frac{1}{2}$  per cent and payable "in coin," was sold privately to a syndicate of Jewish bankers in London at \$1.04 $\frac{1}{2}$ . One week later they were quoted in the New York market at \$1.08 $\frac{1}{2}$  @ 1.12. The significance of these figures is plain—the Government sold the bonds privately to foreign speculators at from four to eight per cent less than our own people are willing to pay for them. In other words, the speculators will clean up anywhere from three to eight millions of dollars on the deal. But this is not the worst of it; for in selling privately and at a price below normal, a body blow has been given to the credit of the country. At home it will make no difference, but abroad it appears that the President and the Secretary of the Treasury are fearful of our financial stability—so fearful as to sell American bonds for less than the current price of Egyptian and other second-class securities in the English market. The act, of course, is indefensible, and it is not surprising that such hotheads as Senators Teller, Wolcott and Stewart should be in a rage about it. The former went to the extreme of declaring on the floor of the Senate, last Saturday, that the President had lent himself to a corrupt transaction; but this, of course, was rejected by the better sense of those who do not go off at half cock. Mr. Mills, while withdrawing from the support of the President, expressed full confidence in his personal integrity. Senator Sherman spoke in the same spirit. He deprecated the policy of going abroad for bidders when there were buyers at home, and he declared the price at which the sale was effected to be absurdly and ruinously low. "They have made a bad bargain, that is all," said he, "but being a bargain, we must live up to it." Senators Hill and Gray attempted to defend the Administration, but they could only speak in generalities, for, in the face of the figures above noted, there was, of course, nothing to be said. There is in the matter only this consoling reflection, namely, that bad as this transaction is in every view, it will not ruin the country. That it will destroy any credit which Mr. Cleveland may have had in some quarters for financial ability, is perhaps not to be regretted.

In Germany, as in this country, finance is just now the great question, and it is gratifying to know that there, as here, the injustice of the silver discount is understood by some at least among the practical statesmen of the Empire. On Wednesday of last week a resolution looking to a new international

monetary conference in the interest of silver passed the Reichstag (Imperial parliament) by a round majority, and it is probable that such a conference will be convened under German auspices during the current year. Among the several prominent men who publicly declared themselves as favorable to the restoration of silver was Count Herbert Bismarck, son of the ex-Chancellor, who declared that in England, as well as in Germany and America, the principle of bimetalism was a growing one. It is a significant fact that none of the speakers suggested that an independent effort be made to rehabilitate silver, it being universally understood that international co-operation was the only road to the desired end.

The fight at Sacramento against the measure providing for a non-partisan board of inquisitors to investigate charges of official maladministration, election frauds, etc., etc., takes many forms, and there is very serious danger that, by one shuffle or another, the project will be defeated. The original bill, it will be remembered, gave the appointment of the three Commissioners—one to be chosen from each of the three parties—to the Governor. To this objection was made that the Governor might use this power of appointment for partisan purposes. In its latest form the bill provides that the Governor shall name one member of the board and the Legislature the other two. It does not require a world of discernment to see the purpose in this change. It is, in fact, purely in the interest of partisanship. The Governor is a Democrat; the Legislature is Republican—under the amended scheme of appointment the board would be composed of two Republicans and one Democrat. In our judgment the proposed change will be fatal to the purposes in view. The board, to be effective, must be harmonious—that is, it must have an eye single to the work in hand. The Governor, acting in the effort to purify the administration of public officers, may find three suitable men in the three political parties; but they are not likely to be brought together by a system of divided respectability, backed by partisan motives. Under the amended plan of appointment we shall probably have a board working at cross purposes, and for whose findings the public will have no respect. To the RURAL the first proposition seems much the best. We are entirely willing to trust to Gov. Budd's discretion and good purposes, always reserving the privilege of criticism in case results should be disappointing.

### Range of Wheat Prices.

A rather encouraging view of the wheat situation has just been put forth by a local economic writer with a taste for figures, as follows:

The report of the Secretary of Agriculture lays considerable stress on the importance of the Argentine Republic as a competitor in exportation of wheat to markets which have until recently been relied upon to take our exportable surplus, and embodies considerable information received from the American Consul at Buenos Ayres. From this report it appears that the wheat acreage of the Argentine Republic has increased in the ten years last past at an astonishingly rapid rate. The acreage for 1893 was a fraction over eight times greater than the acreage for ten years ago, and the quantity exported in the same year nearly seventeen times greater. As the exports for the first six months for 1894 exceeded those for any preceding twelve months, it is fair to suppose that the ratio of increase has been maintained, and that the Argentine Republic will, before the lapse of many years, take a leading place among the wheat exporting countries of the world.

The fact that her present wheat area is within one hundred miles of tide water, and her more advantageous position with reference to wheat-importing countries, contribute to make our distant sister republic a particularly dangerous competitor to this coast. The difference in distance in her favor is not inconsiderable, as cargoes by sailer may be landed in from seventy-five to eighty-five days a saving, as compared with this port, of about fifty days, though this advantage is partially offset by the superior quality of the California product. However, Pacific coast producers and exporters may find consolation in the benefits to be derived from the construction of the Nicaragua canal, which will materially reduce freights and insurance and shorten the present passage of 130 days around Cape Horn to one of 50 or 60 days by way of the canal. We will then be on more even terms with all of our rivals, and, with the splendid reputation enjoyed by our product, California should be able to profitably compete with any of the wheat-exporting countries. Nevertheless, there are many producers of and dealers in wheat who give it as their opinion that California has seen her best days as an exporter of that article, and predict a steady falling off from her averages of past years, both in product and export. This opinion is, no doubt, founded on the continued low prices prevailing for the last few years and the knowledge that production would cease to be profitable if crops were marketed at such prices.

However, the facts in the case, judging from the past, will hardly warrant such a gloomy view. During the season of 1867-68 the average price for wheat in San Francisco was \$2.36 per cental; in 1868-69, \$1.57—a drop of 49 cents—and in 1869-70 the average fell as low as \$1.69—a decline in two years of 67 cents per cental. Yet the next year places the average at \$2.20 $\frac{1}{2}$ , and the year following again increases it to \$2.34 an advance in two years of 65 cents per cental. In the season of



1874-75 we find the price down to \$1.62, while in 1877-78 the farmers marked their wheat at an average of \$2.18 per hundred. Coming down to later years, we find the average of 1886-87 to be greater than 1884-85 by 21 cents, that for 1890-91 to be 18 cents above 1889-90, while 1891-92 advances the average still further to 35 cents above 1889-90. During the twelve years up to and including 1893-94 the average price of wheat was approximately \$1.42 $\frac{1}{2}$  per cental; and, although the figure for the previous twelve years reached as high as \$1.87 $\frac{1}{2}$ , the reduced expenses of production and harvesting, coupled with cheaper and better facilities for transportation, will nearly, if not fully, cover the difference. There is plenty of money to be made when the price of wheat is in the forties, and the farmer will have but poorly learned the lesson of the past who hesitates to dispose of his crop at so fair a price.

Another argument in favor of better prices is the depleted condition of stocks in England. On December 31, 1894, the stocks in ports of the United Kingdom were 2,040,000 quarters, as against 3,620,000 quarters the previous year, and 3,530,000 quarters the same time in 1892. In 1886 and again in 1890 they had fallen to 2,000,000 quarters. In the former year the English market advanced from 33 shillings 9 pence per quarter in November to 40 shillings in December, while in 1890, aided by reports of European crop damage, the advance was from 38 shillings 9 pence in November to 45 shillings in April of the following year. As the yearly consumption of wheat in England is about 30,000,000 quarters, it will be seen that her present supply would scarcely last a month, and if the Argentine was not now being harvested and exported, together with unusually large shipments from the Baltic, the demands which England would surely make on this country would result in giving better prices to American farmers than they have known for several years. In fact, the extraordinary crops of this country for 1891 and 1892 would have ceased ere this to exercise any influence on prices had not Argentine developed so rapidly as a heavy exporter of grain.

To sum up, the prevailing low prices may be prescribed to three causes—overproduction in this country in the two years mentioned, followed by crops fully up to the average in the succeeding two years; unexpectedly heavy shipments from the Argentine, and the immense depreciation in the purchasing power of silver. In fact, the continued drain of gold from this country may be largely attributed to the reduced value of our exports of cereals and other farm products. It will, however, be noticed that though we have experienced depressions almost as extreme by comparison as that now prevailing, they have always been succeeded by a reaction and corresponding advance, and it is certainly reasonable to assume—as affording some consolation to producers—that there will be no exception to a rule so infallible heretofore.

#### Organization of Fresh Fruit Shippers.

It will be remembered that, at the Convention of Fruit Growers at Sacramento last fall, Mr. H. Weinstock made certain suggestions looking to the sale and distribution of California fruits in the Eastern markets; and that a committee, of which Mr. Weinstock was named as chairman, was appointed to carry them into effect. This committee has been quietly at work to bring all interests into harmony; and their efforts culminated on Monday of this week in the organization of the California Fruit Growers and Shippers' Association. The object of the new society is to establish a bureau of information for the purpose of regulating the distribution of Eastern fruit shipments, also for arranging the number and method of auction sales of such shipments. It was decided to have only one auction room in each city. It was further determined that the sales and rooms should be open and free to all bidders. It is also the intention to do everything possible to in any way further the best interest of the fresh-fruit industry of California. All fruit-growers or shippers or corporations interested in the growing or shipping of fruit, or members of co-operative associations with a like end in view, are eligible to membership.

The meeting by which this organization was brought about was held in the rooms of the State Board of Horticulture and was participated in by Mr. N. Salisbury, representing Porter Brothers' Company of Chicago; J. D. Mathews, representing the Co-operative Fruit Company; David Reese of the Florias Fruit Growers' Association; H. Weinstock of the Orange Vale Colonization Company; Frank H. Buck; W. J. Wilson, Newcastle; H. P. Stabler of the Sutter Fruit Growers' Association; H. A. Fairbanks, representing the National Fruit Association; J. A. Webster of the California Fruit Association; J. Z. Anderson of the J. Z. Anderson Fruit Company; A. T. Hatch; Levi Frisbee of the Mount Shasta Fruit Association; Adam Anderson of the Suisun Valley Fruit Union; Henry Armbrust, Stockton; E. P. Adams of the Santa Cruz Mountain Fruit Exchange; J. C. Shinn, representing the Niles fruit growers; L. W. Buck, Vacaville; H. M. LaRue, Sacramento; E. T. Earl, representing the Earl Fruit Company of Sacramento and Los Angeles, and others. Mr. Weinstock presided and Mr. Frank Buck acted as secretary. During the rather lengthy discussions on the aims and objects of the new society, its practicability and probable results, L. W. Buck made some very appropriate remarks on the manner in which the California fruit growers and shippers have lost money through lack of organization and co-operation.

"This movement," he said, "is a step in the right direction. What the growers and shippers of this State need is concentration, co-operation and control. This accomplished, our present trouble will be over. Heretofore we have been groping about in the dark. No one knew what his neighbor was doing. Different growers were constantly sending fruit to markets already overcrowded with California products. When our proposed bureau of information is in operation, all this will be changed, as all, or nearly all, shipments will be made through the same channel."

#### Scenic Gardening in California.

(Continued from page 113.)

these by newer plantations which include quite a variety of plants. To appreciate how delightful such an approach to the home really is, one only has to remember how ninety-nine out of a hundred rural places, which have as good natural advantages as this one has, really look. It requires no very large expense to produce such an effect as the engraving shows. Probably ten dollars' worth of plants, the employment of a few leisure days and a good supply of love for the work and the significance of it would start any home yard forward so that a few years' growth and maintenance would surely attain a result so eminently to be desired.

If one has time enough or money enough and water enough the scene which the second picture discloses is easily attainable. How many stream sides through private grounds are now bare and desolate or littered up with refuse from the habitation. And yet how easy to build a dam and get a pond of still water; how easy to collect the rocks for the rockery and to build the bridge from branches duly sawn and fitted together. Then plants from the nursery and plants from the adjacent canyon, properly commingled, produce the picture so delightful to the eye and so restful to the mind. Surely these things are worth thinking about and working for.

#### AGRICULTURAL SCIENCE.

##### Foreign Expert Opinions on California Experiment Station Work.

As mentioned in the report of the University Experiment Station, recently published, the Station was visited in the summer of 1893 by a number of gentlemen from various parts of Europe who had been sent by their respective governments as delegates to the Columbian Exposition. Among these was Prof. Max Maerker, Director of the Experiment Station at Halle, Germany, the leading institution of its kind in that empire, and his official report of his observations has just reached us. In addition to a discussion of American agriculture in general, he describes four of the Experiment Stations visited by him, and first among these that of the State University at Berkeley. The following is a condensed translation of his report on our station:

This institution is under the direction of Prof. E. W. Hilgard, who is not only Director of the Agricultural Experiment Station, but also at the head of the whole department of agricultural instruction of the University of California. Prof. Hilgard, German born, is an extraordinarily competent, active and well-read man, who has acquired high standing and has put agricultural knowledge on a prominent footing in the University.

The laboratory of the Agricultural Experiment Station is one of the best arranged in the United States, in a roomy building, yet without luxury, thoroughly adapted to its purpose, with a certain convenience which cannot be said of many other agricultural laboratories in the country, most of which are housed in very small spaces, and can work satisfactorily only by making use of the utmost technical refinements. The work in the laboratory appears very largely directed toward soil investigation and soil analyses; hundreds of samples are examined every year, both mechanically and chemically. There is used in this work an elutriating apparatus constructed by Prof. Hilgard, whose principle and mode of action are new and peculiar, and, as we were convinced in our hasty observation, operates satisfactorily. But in Prof. Hilgard's laboratory investigations were being made not only by regular assistants, but students were also at work, and all necessary appliances were there in good condition.

This Experiment Station also maintains departments devoted to the study of Entomology and Plant Diseases; both of these are well equipped and are well patronized by students. The special branches of Entomology and Plant Diseases seem to find much favor with the lady students, several of which we noticed in the respective laboratories.

There are connected with the Experiment Station at Berkeley, four experimental culture stations in different portions of California; they are devoted partly to field-culture, partly to horticulture and viticulture. These two industries are of leading importance to California, which, as is well known, besides Florida, is the main wine and fruit producer of the Union; they are therefore given the utmost consideration at the Berkeley Experiment Station. The Experiment Station possesses a well-equipped Oenological Department; an excellent experimental viticultural laboratory, and on the ground floor, cellar equipments for the handling and observation of wines. The grapes, in so far as they serve the purposes of experimentation, are shipped from the different culture stations to Berkeley, and are pressed there. We saw hundreds of samples in the cellar, of different kinds of wines, from different localities, and manipulated in various ways, in small casks of from 10 to 12 gallons capacity. While this may not be altogether

representative of wine making on a large scale, it certainly supplies some valuable material for preliminary study, and for instruction, and is widely appreciated.

At the Culture Stations, which are situated in the sub-tropical and temperate, as well as in the colder, higher regions, preference is given to culture experiments of different varieties, in order to determine their suitability to the different localities. These experiments are particularly necessary and beneficial to California, as this State is possessed of all different climates, from the coldest mountain regions in the Sierras, to the hottest sub-tropical; and Prof. Hilgard has had great success in these experiments, as an easily intelligible result of existing conditions.

In order to apply the results thus obtained to practice as quickly as possible, an institute for free seed distribution has been established, through which seeds are distributed to practical farmers, who are in constant communication with the station. Hundreds of farmers in different portions of the State have availed themselves of this opportunity of making experiments in connection with the station, and have fulfilled their part (of reporting results) most conscientiously. The advantage of this kind of experiment has become so convincing, that there is no difficulty in securing a very large number of practical co-workers among the ranks of the farmers.

Prof. Hilgard is also carrying on experiments in the culture of the sugar beet in California, the results of which, carried on for many years, will be particularly interesting to those engaged in the industry in Germany. The sugar beet succeeds well all over California, and in favorable years reaches a sugar content of 20% in the juice, which would correspond to about 18% in the beet. The sugar beet is produced from European seed (largely from the Dippe seed) which has there proved thoroughly successful; and needs little hoeing, as in the prevailing drought of summer no weeds spring up between the beets. The author can confirm this statement, having seen many beetfields during his journey through California, having a very thin stand, yet showed very few weeds. The culture of the sugar beet is carried on preferably in the light alluvial soil, in which, evidently, the planting, cultivation and harvesting is very easy.

In regard to the capabilities of the soil and fertilizing in beet culture in California, Prof. Hilgard says that an extraordinary amount of saltpeter is in circulation in California soils; that in many cases there is rather too much than too little nitrogen, and therefore nitrogen fertilizers for sugar beets, as well as for all other plants, is, in many soils, unnecessary.

According to Prof. Hilgard, California soils are not, as a whole, poor in phosphates, but are usually poor in soluble phosphoric acid. The supply of available phosphoric acid is thus very low, so that cultivation of other field crops can be carried on for only a short time without phosphate fertilization, and also, as may be foreseen, it will soon be necessary for the beets. But the California soils do not distinguish themselves so greatly from ours in this respect, as new investigations, now going on, show that the richness of our soils in phosphoric acid has been greatly overestimated. According to Prof. Hilgard, none of the California soils are, for the present, poor in potash, and fertilization with this material is not yet practiced. These favorable conditions have attracted the attention of capitalists to sugar manufacture.

[Dr. Maerker then discusses at some length the labor situation in this State.]

In connection with the Experiment Station, there is also a garden of economic plants, serving specially for illustration, together with the botanical garden of the University. Fruit culture was again very prominent, but a large number of other plants are cultivated experimentally, as well as for illustration.

On the whole, the institution at Berkeley may be considered, for American conditions, thoroughly exemplary and excellently well managed. Of American Experiment Stations it stands among the best in fulfilling the objects of instruction and experimentation in the interest of practice.

*Recognition in France.*—The *Journal de l'Agriculture Pratique*, the leading agricultural journal of France, publishes an article from the pen of Prof. Louis Grandeau, director of the Government agricultural laboratory at Paris, embodying almost in its entirety that part of University Bulletin 105, in which Mr. M. E. Jaffa treats of the Australian salt bush. Prof. Grandeau recommends the introduction of this plant, which has proved successful in California, for the culture of saline lands in southern France, Algeria and Tunis. This recognition of the wide importance of the work of the California station is very significant.

The dairy business is but in its infancy in this State. There is room for increase in this industry, and California offers great inducement for investment of capital in creameries. With our great scope of country that is most favorable to the growth of that succulent forage plant, alfalfa—which, when mixed with rolled wheat, forms one of the richest milk-producing feeds known—California should now be, what she will be in the near future, a large exporting State in dairy products.



## THE FIELD.

## The Great Wheat Problem—No. 1.

## California Growers Give Their Experience and Beliefs.

As promised in last week's RURAL, we begin here with the publication of reports from wheat growers in all parts of California concerning their experience of the cost of producing wheat and their views of the wheat situation generally. For the reports we are indebted to the California State Board of Agriculture.

## TEHAMA COUNTY.

*Frank Houghton, Corning.*—With a yield of fifteen bushels per acre, including interest at seven per cent upon value of land, etc., wheat costs me thirty-three cents per bushel. The present value of land upon which wheat is produced at the cost named is \$10 per acre. To make wheat growing profitable at one cent per pound, land should yield from twenty to twenty-five bushels per acre.

I have been feeding wheat to 900 hogs this winter, and sold 300 head at four and one-quarter cents, charging myself with thirty-five cents per bushel for wheat fed. The four and one-quarter cents per pound received for hogs will give me a profit on my wheat.

I do not think it would be profitable for growers to feed too much of their wheat, as it will have a tendency to reduce the price of stock.

An act of Congress authorizing the free and unlimited coinage of silver would, in my opinion, double the price of wheat immediately, as I know the price of silver controls the price of wheat.

For the past three years I have not been able to make the growing of wheat profitable.

## BUTTE COUNTY.

*W. W. Durham, Durham.*—My wheat costs me sixty-five cents per bushel in the sack, which includes interest, etc. The present value of the land upon which wheat is produced at above cost is \$80 per acre. Not over twenty per cent of the land in this county now produces twenty-five bushels per acre, which amount should be raised to make wheat growing fairly profitable at one cent per pound.

Wheat is excellent food for all live stock when properly fed, particularly swine. With pork at four cents per pound on ranch, I think it would be profitable to feed a large proportion of wheat crop.

To make wheat growing more profitable, reduce the acreage devoted to wheat growing, planting alfalfa where possible. Keep more live stock, poultry, etc.—in short, practice diversity of farming. The farmer should spend more of his time on the farm and less in town; more on improvements and less in the "gin mills". The California farmer will have to practice the same rigid economy that has enabled the older States to pull through periods of hard times.

*E. T. Reynolds, Chico.*—Have had limited experience in the use of wheat as feed for animals, but see no reason why it should not be used extensively as such. No other grain is superior in feeding value.

At present prices I think it would be more profitable for growers to feed a large proportion of their wheat and market cattle and swine thus fattened. Wheat costs me as follows per bushel in the sack: Crop of 10 bushels per acre, 90 cents; 15 bushels, 63 cents; 20 bushels, 50 cents; 25 bushels, 42 cents; and 30 bushels, 37 cents. The present value of the land upon which wheat is produced at above cost is \$60 per acre.

For their own protection farmers should cooperate.

*Garrett Koppel, Gridley.*—With a yield of twenty-five bushels per acre, wheat costs me forty cents per bushel. I should judge three-fourths of the wheat land in Gridley, Hamilton and Chico townships now yields twenty-five bushels per acre, which would make wheat growing at one cent per pound selling price fairly profitable in this county upon land the present value of which is \$60 per acre.

Wheat is a good feed, mixed or by itself, except for horses, when it should be mixed with barley or oats—about one-half of each. I think it would be more profitable, at present prices, for growers to feed a large proportion of their wheat and market cattle and swine thus fattened.

## YUBA COUNTY.

*Hugh Morrison, Wheatland.*—Have had long experience in the use of wheat for swine, and allowing it takes eight pounds of wheat (three-quarters of a cent per pound equals six cents) to one of pork (which is now worth on foot three and one-half cents) it cannot be fed profitably. It would be like the "Devil shearing the hog, all squeal and no wool."

Around this section the crops must be either wheat, barley or oats, with but very little exception. There was a time when we had 60,000 acres of land upon which almost anything would give large returns, but this was all destroyed by hydraulic mining, permitted by the will of the majority. All the unfortunate owners of this land were protected by the ever-glorious constitution of the United States, but its powers did not reach as far as Yuba county.

Wheat costs me per bushel in sack, if the yield is

twenty bushels per acre, 57 cents. With land yielding twenty bushels per acre the growing of wheat at one cent per pound would be fairly profitable in this county, but do not think our wheat land will average nearly this much.

## PLACER COUNTY.

*E. J. Sparks, Lincoln.*—What the farmers most need at present is a canal across the Isthmus, cheaper freight to Liverpool, and the doing away of combined milling trusts and stock boards, or else we will have to quit the business.

Wheat costs me per bushel in the sack, which includes interest, etc., as follows:

|                        |                     |                      |     |
|------------------------|---------------------|----------------------|-----|
| 10 bushels per acre... | \$ .64½ per bushel. | Value of land, \$20. |     |
| 15 " " "               | .56 " "             | " " "                | 25. |
| 20 " " "               | .45 " "             | " " "                | 30. |
| 25 " " "               | .40 " "             | " " "                | 35. |

With land yielding twenty-five bushels per acre, a profit of \$4.98 could be realized with wheat at one cent per pound. Probably one-tenth of the wheat land in this county now produces this amount. Have had experience in feeding wheat to swine, but find it will not pay, as it takes six pounds of wheat to make one of pork.

*Peter Abart, Lincoln.*—A very small proportion of this county is devoted to the raising of grain, fruit growing being the leading industry. With a yield of twenty bushels per acre, wheat costs me twenty-five cents per bushel in sack. Land in this county should yield fifteen bushels per acre to make the growing of wheat profitable at one cent per pound. It would pay growers to feed wheat providing they can get four cents per pound for hogs. Five pounds of wheat will make one pound of pork. I do not think it would pay to feed cattle, there being so much grass feed.

*E. C. Rogers, Sheridan.*—Land in this county should produce twenty bushels per acre in order to make wheat-growing profitable at one cent per pound. Only one-third of the land now produces this amount.

I have fed wheat to milch cows, hogs and horses with satisfactory results. Two quarts of wheat are as good as four quarts of barley, or six quarts of bran. I think at present prices it would be more profitable for growers to feed a large proportion of their wheat and market cattle and swine thus fattened.

## AMADOR COUNTY.

*J. A. Golding, Llaneta Plana.*—Wheat cannot be raised in this county profitably at one cent per pound unless land yields twenty bushels per acre; a very small proportion, however, now yields this amount.

I have had thirty years' experience in the use of wheat as feed, and find it superior to any other grain at the same price. I think one pound of wheat is equal to two of barley. Ten pounds of wheat will make two pounds of pork. It should be fed carefully to horses and cattle.

There is a great wrong in all our government affairs, and the people are to blame. The farmers are the hardest class of people to organize for their own protection in the world. Farmers, as a rule, do not harmonize; the unsuccessful ones are envious of the successful. It is claimed any fool can farm, and that all the smart men and boys go to the cities and go into business. But I advocate it takes a better head to run a farm and market the products thereof than it does to run a mercantile business. A farmer has to make a study of the kind of stock to keep that will be profitable, and at the same time not too expensive; also the right time to buy and sell. The best of us, however, are deceived sometimes.

Small farms, upon which the owner can do most of his labor, or where but little help is required, will, in my opinion, be the most successful.

## SUTTER.

*George Ohlger, Yuba City.*—Fifty per cent of the wheat land in this county now yields twenty-five bushels per acre, which makes wheat growing fairly profitable at one cent per pound.

Wheat costs me per bushel in the sack, including seven per cent interest on value of land, etc., 46 cts. for 10 bushels to the acre; 32 cts. for 15 bushels; 25 cts. for 20 bushels; 24 cts. for 25 bushels, and 18 cts. for 30 bushels. The present value of land upon which wheat is produced at cost named is \$50 per acre.

I am feeding wheat to hogs and find it excellent and profitable for fattening, and see no reason why it should not be so used. At any price below one cent per pound, I think it would be more profitable for growers to feed a large proportion of their wheat, and market cattle and swine thus fattened.

My opinion, in order to insure the grower warranted returns, would be to reduce the surplus by feeding; also to obtain a wider market for the meat product. In a limited experience in 1893 in feeding hogs from the granary, 75 cents barley brought \$1.10 converted into pork, the pork selling at \$5.50 per cwt. This year, pork being cheaper, the showing will be less, although a fair price for wheat and barley will be realized. I am feeding this season more extensively of both wheat and barley to hogs, but as I have not "cleaned up" yet cannot give results with any degree of accuracy, still I hope to realize one cent per pound for my wheat.

The combined harvester and other advances in

wheat culture greatly cheapen the cost of production of the cereal in our interior valleys, and while the estimates given above are very low there is still a living in the business if every advantage is availed of by feeding, etc. I have no experience in feeding wheat to other animals than swine. I might add that a neighbor fed wheat to swine, then sold at \$4.40 on foot, and figures \$1.25 realized for his wheat per cwt. This, I think, will excel my own returns because of the lower price now prevailing, although I secured the same price for fifty head at the same time.

*H. Luther, Liver Oak.*—The present value of good wheat land in this county is \$40 per acre and should yield fifteen bushels per acre to make the growing of wheat profitable at one cent per pound. Fifty per cent of the wheat land now yields this amount.

It would pay growers at present prices to feed a large proportion of their wheat and market cattle and swine thus fattened.

The only thing that would help the farmers at present would be the borrowing of money at a lower rate of interest. Many owe nearly as much as their farm is worth, and interest is one of the hardest obligations they have to meet.

I submit the following figures upon cost of wheat per bushel in sack, including interest at seven per cent, but not transportation, which costs 12½ cents to tidewater; unloading and weighing, 1 cent; total 13½ cents per 100 pounds:

|                                       |                                       |
|---------------------------------------|---------------------------------------|
| 10 bushels per acre, \$ .75 per bush. | 25 bushels per acre, \$ .35 per bush. |
| 15 " " "                              | 30 " " "                              |
| 20 " " "                              | 35 " " "                              |

(To be Continued.)

## HORTICULTURE.

## Selecting, Planting and Pruning.

TO THE EDITOR:—From the subjects above the reader may think that I am going to write a treatise on each. If you will think for a moment you will see that an agricultural paper could not afford the space, because it would take several numbers to treat them exhaustively, and none but a professor is expected to treat such subjects, except to give hints and set people to thinking outside of beaten channels.

These few lines are more intended for beginners and for those who have planted trees and vines and have not made a success, from planting the wrong kind or in the wrong place. Read the best works that you can procure on the line of work that you are about to follow. Correspond with the most intelligent nurserymen and orchardists in the State. After obtaining all the information you can through this channel, take your note book and spend one or two weeks in visiting some of the most successful fruit-growers whose land is similarly located as your own. It is better to spend two weeks now than five years, as I did, in finding out that I selected the wrong kind for the wrong soil.

Do not be timid in asking questions in a gentlemanly and courteous manner. There is a saying that runs something like this: "It is delightful to acquire information, but more so to instruct the ignorant." If the instructor should tell you something that you already knew, do not chill the atmosphere about him by saying: "I know it; I know it;" or "I understand it; I understand it." That kind of a magnet is not very good to draw information.

If you have bedrock soil do not go to a river orchard for information. There are so many successful fruit-growers now in all kinds of soil and situations, it is easy to obtain knowledge on all of its branches, as the period of experiment has passed on all well known varieties. Do not overlook the experiment stations or fail to consult Professors Hilgard and Wickson, who are putting the best part of their lives on that line of thought.

When in the orchard with the proprietor or foreman keep the note book and pencil well in hand, asking how far apart such trees should be planted, how deep and large the holes, how to prune the roots, how to plant so the rows will be in line whichever way you look.

I planted a pear orchard without experience and little consultation, except what I got from Downing. As soon as the trees came into bearing I began to change the variety by grafting, which I kept on changing for several years, until I found I could not keep up with the demands of the market, and then I dug them up, and am now enjoying three square meals a day cooked by that firewood.

Do not forget that the nurseryman grows his trees for sale and is not always a disinterested party as to the adaptation to your soil and situation.

I believe trees of one year's growth are preferable, as at the age of five years a distinction in size cannot be seen.

The error of new beginners is to plant too close. They think it a waste of land to plant whip stalks twenty or thirty feet apart.

Look well to the pruning; do not cut a limb or twig without giving a reason for it. If you cannot give a reason keep your knife in your pocket, or whittle sticks or pare your finger nails with it. By



looking at a good many orchards I can tell the length of ladders employed in pruning. It is distressing to see how some orchards, and especially shade trees, are butchered—no, mangled is a more appropriate term. If trees are being grown for timber or firewood, that is one thing; if they are grown for ornament or profit, that is another.

Trees or shrubs that have been grown in boxes or pots are liable to have twisting roots, like a cork-screw, and when planted as they come from the same, will blow over for lack of equilateral or supporting roots.

Take a sharp knife and cut down through these twisting roots before planting, and the plant will throw out good supporting roots that will hold it against ordinary winds and storms. The gum tree was condemned a few years ago because it had bad roots and blew over. The reason was, it was taken out of these boxes and pots without cutting the roots, and they ran down like an auger, and could not hold up the tree. The Australian acacia, with its fragrant blossoms and the first thing to come out in the spring, has been almost discarded on the same grounds. Black locust will not do in a wet subsoil, its redeeming quality being its fragrant blossoms. The Lombardy poplar is a thing of the past. It is a harbor for worms and subject to early decay, and will blow down when least expected.

The standard shade trees appear to be the elm, walnut, eucalyptus, sycamore, Australian acacias and South Carolina poplar.

No dooryard in the valleys or foothills seems complete without the orange and lemon. Do not plant your trees as you bury a cat, in a 7x9 pot hole.

Sacramento. DANIEL FLINT.

#### St. Ambroise Apricot — Non-Bearing Apples.

TO THE EDITOR:—We have fifty trees of the St. Ambroise apricot, planted in 1888 on strong, deep, sedimentary soil, in an orchard of miscellaneous varieties of apricots. The trees have made a good growth and are equal in size to any of the standard varieties. They bore an average of twenty-five pounds of apricots, averaging seven and eight to the pound, at four years of age, seven pounds at five years—but the fruit was of enormous size—and one hundred pounds of good-sized fruit at six years. They have borne about one-half or one-third as heavy a crop as the Royal and Blenheim, and about an equal crop with the Large Early Montgamet. All varieties are treated in the same manner as to care, pruning, etc., and are not irrigated. With us the St. Ambroise ripens a few days in advance of other varieties. It is a good keeper, and for that reason might be valuable as a shipping variety, though lacking in flavor. For drying, it is undesirable, drying away badly and having the white appearance at the pit which your correspondents mention.

In the same miscellaneous orchard we have twenty varieties of apples, all of which have borne good crops annually, excepting Northern Spy and Red Astrachan, neither of which have ever produced a single specimen on any of the six trees. Is this customary? If not, what is the remedy?

Eden Vale, Santa Clara Co. W. P. LYON.

The Northern Spy is notably a shy bearer and has been freely grafted over or cut out because of that defect. The Red Astrachan has usually a better reputation. What have apple growers to say on this matter?

#### A Frost Alarm Used in Colusa.

TO THE EDITOR:—In your last issue I see two articles touching on electric thermometers, etc., the same being in answer to a letter of Mr. Swett of Santa Clara, appearing in the RURAL some two or three weeks ago. For the benefit of your many readers, and Mr. Swett particularly, I will give you a description of a simple contrivance which I have had in use for two winters, and which has given entire satisfaction. It is nothing more nor less than a very sensitive thermostat connected by an electric current to an electric bell in my bedroom. It can be adjusted to any degree of temperature and is affected by the slightest change the same as a thermometer. I first tried an ordinary thermostat such as is used in incubators for registering the temperature; but as they are made to register heat, I reversed the lever, and it then registered at a much lower degree of temperature; but it was not sufficiently sensitive, so I discarded it for one sent me by a friend versed in electrical appliances, which I think he had made after his own ideas. Of this, however, I am not quite positive, but can easily ascertain whether or not the kind I now have can be purchased ready for use. The thermostat I am using is twelve inches long with a lever ten inches long by three-fourths of an inch wide and one-quarter inch thick, and is composed of what appears to be a strip of hard rubber or gutta percha riveted to a thin strip of steel the same length and width but only one-eighth as thick, with rivets one-half inch apart. This lever (which works simply by expansion and contraction) is con-

nected at the upper end by a brass screw which holds it firmly in a socket of the same metal. At the lower end of the lever is another brass screw running through the center, which is the part which connects the circuit and rings the bell. Opposite the lower screw is a thumb screw, by which the thermostat is set to the proper degree of temperature. The manner of setting is very simple. When the thermometer (which is hung alongside of the thermostat) shows the degree at which you want the alarm bell to ring, turn the thumb screw until the needle touches the brass screw on the lower end of the lever and rings the bell. This of course necessitates watching the mercury until it reaches the point of danger. I could not give the exact cost of the instrument complete, for the reason that I do not know the cost of the thermostat, but I think in the neighborhood of \$10. If the gentleman seeking information desires any further knowledge than I have outlined here, I shall be pleased to answer anything within my ken.

Colusa, Cal.

FRANK W. WILLIS.

#### Automatic Frost Signals.

TO THE EDITOR:—In regard to constructing an automatic frost signal, I wish to say that I have used an instrument for that purpose which gives entire satisfaction, and it is very simple. It consists of a thermostat, battery and bell. The thermostat can be made by any electrician, from whom the battery, wire and bell can be purchased as well, and the entire outfit should not cost more than five dollars.

I also have an instrument like that described by Mr. Lotman, and I make electrical contact with the hand of thermometer striking the end of an insulated wire inserted through the side, opposite the degree of temperature desired; but this outfit costs more than the one described above, and I do not find it any more reliable.

The thermostat is a coiled spring made of two different strips (rubber and steel), fastened together their entire length. One end of the spring is fastened to a post, leaving the other end loose, opposite which is another post having a set screw to adjust for any temperature desired. To these two posts wires are fastened to connect with battery and bell.

Watsonville, Cal.

WM. A. BECK.

#### The Queen Olive.

TO THE EDITOR:—This celebrated olive of commerce has at last arrived in California beyond dispute. For years all of us who are interested in olive culture have hoped to secure it, and hardly a nurseryman with a big olive for sale has failed to advertise it as the "Queen," leaving the innocent purchaser to discover—after the ball!—what was behind the masquerade. But now we have royalty itself. Mr. John Rock of Niles and Rev. C. F. Loop of Pomona, each proceeding from his own independent importation (the former from Spain, the latter from France), have brought their trees to fruition for the first time in 1894, and the results (which you may see in the University's collection at Berkeley) prove that we have got the "Queen Olive" at last.

This is the name by which this Spanish olive has been made known commercially to the world through the labels of the London firm which bottles and distributes it. The name is not their invention, but is taken from this olive's title in its home at Seville, where it is known as "Azeituna de la Reina," or "Olive of the Queen." This is a prettier name than its commercial derivative, for "Queen olive" means only queen among olives, whereas "olive of the queen" means an olive to the queen's taste and fit for her table.

As all our knowledge of the Spanish olives is based upon the standard work by Senor Tablada, entitled "The Olive in Spain," I will give from its second edition (Madrid, 1870, pp. 145-147) a condensed translation of what he says of the "Queen," or "Olive Sevillano."

It is one of the early-ripening kinds. It is known also by other names, among which, in Spain, are "Olive Sevillano Gordal" or "Fat olive of Seville," and, in France, "Olea Hispana" (Latin for "Spanish olive." It is a tree of small habit in general, which is not the case (says Tablada) with the other variety called Gordal; but it produces fruit of the greatest size known. The stone will average only about one-sixth of the weight of the whole olive. In Seville Tablada has weighed olives of this variety which were from twelve to fourteen grams in total weight. When ripe the pulp adheres to the stone and gives but little and bitter oil. But as this olive is confined to pickling it is gathered green, and the tree produces with great regularity. For this use 3400 degrees of heat are sufficient, and the crop is gathered early. The tree requires good, fertile soil, and irrigation and manure in dry lands; it resists cold but little, it is sensitive to pruning, especially in cold places, but can stand it if the low temperature is not prolonged and the thaw takes place without the sun appearing. Tablada's own trees of this variety do

not appear to have suffered any more damage than those of the "Cornicabra" variety, which are in the majority with him.

Such is one of the most celebrated table olives in the world, which has now found a new home in California.

A. A. WHEELER.

Nutwood, Clear Lake, February, 1895.

#### The Christian Apricot.

TO THE EDITOR:—Having been a subscriber for fifteen years for the PACIFIC RURAL PRESS, I take advantage of your offer to answer queries by asking the qualities of the Christian apricot. Please state its bearing quality, its shipping (green) quality and general characteristics.

J. R. PARKER.

Capay, Yolo Co.

This is a seedling of Moorpark originating with Mr. Christian of Alhambra valley, Contra Costa county, and endorsed by Prof. John Swett of that valley as equal in size to Moorpark, quite as good quality, and ripens evenly. We hope to hear from all growers who have experience with it.—Ed.

#### SHEEP AND WOOL.

##### Good Points for Shropshires.

TO THE EDITOR:—In my letter in the RURAL of February 9th I closed with an allusion to a letter of Mr. Alfred Mansell on the outlook for Shropshires. He says:

Despite the severe competition of the breeders of other varieties of sheep, the Shropshire still more than maintains its prominent and ubiquitous position in Great Britain and Ireland, flourishing and proving a rent payer in every county in England and Wales, in several districts north of the Tweed and also north, south, east and west of the Emerald Isle. This great aptitude of the Shropshire sheep to adapt itself to all soils and climates, from the rich valleys of England to the high mountainous districts in Wales or the humid climate of Ireland, has greatly helped to make the breed a universal favorite.

The Shropshires are evidently selling for more money than are sheep of any other breed in Great Britain, for Mr. Mansell quotes four rams that sold at prices ranging from \$525 up to \$1050, respectively. At one sale an average of \$154 was obtained for all the rams sold, while ordinary field ewes have been making about \$3.50 per head over last year's prices. He also says that in Ireland and Scotland rams and ram lambs have sold well and are largely used for crossing purposes, it being found by experience that lambs got by Shropshire sires generally sell for the most money. To prove that they are capable of making a good and profitable growth, he refers to lambs from Roscommon ewes, killed in October, that dressed over eighty pounds a carcass. That is certainly a good weight for age, and it would undoubtedly be good "lamb," as one of the advantages Shropshire mutton has over that from some other breeds is a greater proportion of lean meat as compared with the fat. Upon the whole, the characteristics of the breed designate vigor and hardihood, combined with ample size and good quality of both meat and wool, qualities which Mr. Mansell urges breeders to use their best endeavors to maintain, by saying:

To our contemporary breeders on your vast continent may I be permitted to give one word of advice, namely, to take special care in the selection of the sheep they import, whether it be rams or ewes, and to buy only from those here who are really careful and thoughtful breeders and have for a long series of years successfully bred with a view of improving the general character of their entire flock and eliminating as far as possible all the bad faults. We all know that there are sheep among all breeds which practically please the eye as well or perhaps better than very well-bred ones, but what will be the result of introducing sheep which can be perhaps best described as "good commercial sheep" which have been well nurtured and grown but do not inherit sufficient strength of good blood, confirmed by generations of careful breeding, to be relied upon to transmit their good qualities to their progeny?

No doubt but the American breeders of this ideal mutton sheep have made great progress within the last few years and are wide awake to the importance of a good carcass of mutton and wool, seeing that it no longer pays to keep sheep for the production of wool only.

*American Shropshires in England.*—Dr. G. Howard Davidson of Millbrook, N. Y., showed considerable courage and enterprise in taking a number of his Shropshires to England last summer for exhibition at the Royal Show at Cambridge, where his sheep were so favorably noticed as to secure a ticket of commendation for a pen of shearling ewes.

In reference to this exhibition the English *Agricultural Gazette* remarked at the time that breeders in the United States should take courage from the fact that these distant entries are of such a good description as to recommend their breed largely in the country from which they came, for, though the American representatives are not of quite such a high character as to put their English ancestors in the shade, they are sufficiently good to elicit commendation from the judges, which, in classes of such merit as those at Cambridge, is saying a great deal. To any breeder who does not mind the expense of making such an exhibition the above remarks afford



some encouragement for him to try again; still the trial made last year may be looked upon in the light of an experimental comparison rather than of making a show for the money there is in it, and one which may be satisfying to all parties till further improvement has been brought about by the skill and energy of some of our American breeders.

*The Down's Sheep.*—In referring to tables in the English papers, which give the age, live weight and gain per day since birth of the different breeds of cattle and sheep exhibited at the late Smithfield (London) Fat Stock Show, I find the averages of the four principal breeds of "Down" sheep to be as in the following table for lambs under twelve months old:

| Breed.            | Average age in days. | Average weight, lbs. | Average daily gain, lbs. |
|-------------------|----------------------|----------------------|--------------------------|
| Southdowns.....   | 238                  | 154                  | .53                      |
| Shropshires.....  | 285                  | 151                  | .547                     |
| Hampshires.....   | 316                  | 212                  | .67                      |
| Oxfordshires..... | 289.5                | 188.5                | .654                     |

The advocates of the two breeds, Southdown and Shropshire, have little to differ upon according to the above showing, and whatever there may be of difference in weight is counterbalanced in this case by the fact of the Southdowns capturing the champion plate as best pen of short-wooled sheep in the show, the Shropshires coming in for the reserve ticket; then, too, these all being "show sheep," some variation in gain might possibly be credited to the skill of the feeder either in the one case or the other, but that the British shepherds are adepts in "trimming" a show sheep as well as in feeding it, and that the herdsmen have developed the requisite skill for training, feeding and brushing up the hair of show cattle to an uncommonly high degree, no one can deny.

*Tricks of Showmen.*—The trimming of sheep into shape with shears, or the polished horns of cattle, will not deceive a practical judge who knows how to go about handling them and thus find out the weak places and the good points in the carcass under the wool, but it is just the thing to "take the eye" with the kind of judges we too frequently have at our live-stock exhibitions in this State, and the men who work around in the cattle ring, or lean on the fence of the sheep pens as if they did not know where to put their hands (on the animals), and sometimes finish off by saying, "Well, he got the first premium, let's give the second to—the other fellow." No wonder that breeders of pedigree stock do not care to go to the expense, the worry and annoyance, besides the risk connected with traveling valuable stock long distances, in order to make an exhibit at the fairs. We want a more advanced system of selecting judges to make the awards, and the sooner it is put in practice the sooner will the live-stock classes be better filled. ROBERT ASHBURNER.

Baden, San Mateo Co.

## THE DAIRY.

### Alfalfa Growing in Los Angeles and Sacramento Counties.

*Benjamin Walton, Compton.*—I have had experience with 100 to 200 acres, three years, on sediment land without clay or hardpan. Water is found from twenty to thirty-five feet from the surface: soil, generally moist in the valleys, and hard and dry on the billy land, with considerable difference as to depth. It is very important to have the ground properly prepared for alfalfa; it should be leveled, and plowed so that the dead furrows will carry off the surplus water, to prevent the roots from rotting. In this climate, we sow any time from November to May, as we have no freezing weather to kill it. Usually sow with barley, mowing the barley before ripe, for hay, and getting three or four cuttings of alfalfa the first season. Sometimes we sow it alone, clipping it to keep down the weeds; we get the best stands by this method. In some sections the land is irrigated after each cutting, which is every four weeks. The quantity of water must be governed by the nature of the soil. In our (Los Angeles) valley, we have artesian wells or river water. Where these cannot be had, wind pumps are used, and sometimes gasoline engines. After the first year I have obtained six and seven cuttings, averaging one ton each cutting. In cutting for hay the proper time is just as it begins to bloom. Alfalfa hay here is cut one day and raked and shocked the next. Stack in ricks, north and south, not too wide; it must be dry, or it will mold. Land here is valued at \$150 per acre. Baling costs \$1.50 per ton; bales weighing 250 pounds are preferred. The average price per ton of alfalfa hay has been \$10. Seed costs us ten cents per pound. Alfalfa hay is fully equal to clover or timothy for farm animals; it is our only pasture for swine, as we have no clover or timothy. In this valley I do not consider it advisable to pasture alfalfa; we have no winters; it is more profitable to cut it for hay than to pasture; we realize from \$20 to \$100 per acre. Cattle bloat on alfalfa the same as on clover; a remedy is to tie a stick in their mouths, with straps like a bridle bit, which causes them to belch up the gas. Alfalfa raised without irrigation is not as libable to be weedy; otherwise there is no difference. The straw from seed alfalfa compares very well with the straw of

grain cut green. The soil has much to do with the longevity of the alfalfa plant; some land will barely raise a crop, while other land will produce a vigorous growth indefinitely. About the second or third year it attains its best yield; then, if the land is good for its growth, there is no telling how long it may last. In ridding land of alfalfa, every root must be cut off and harrowed up. Its roots run deep, and if water stands around them they will rot off and yet abundant moisture is essential. The roots usually run down from four to six feet, and sometimes to ten or twelve; hence, a cold subsoil or hardpan would not be suitable. Here, it pays well to raise alfalfa on land worth \$150 to \$200 per acre; it would not, however, if remote from market.

### SACRAMENTO COUNTY.

*Franklin Brown, Freeport.*—For ten years I have been growing 150 acres of alfalfa on "river" land; loam and sediment very deep. The soil is moist all the way to water, twelve feet down. For alfalfa, the soil should be well pulverized; sow twenty pounds of seed per acre, after the land has been rolled; then harrow lightly. Sowing in February does best here. Cutting a hay crop as soon as large enough will make the second crop free from weeds. One hundred acres averaged five tons per acre the first year. We have no trouble from winterkilling, unless the ground is flooded or water stands too near the surface. We do not irrigate, and will get five cuttings this year. Our average is five cuttings, and one ton each cutting. For hay, it should be cut when nearly in full bloom. If the first cutting is made early, the second or third crop is used for seed here; but we never cut for seed. For hay, rake the next day and shock. In three to five days it should be ready to stack or put in the mow. We stack with derrick. On land worth \$200 it costs about \$1.50 per ton to raise and put alfalfa in stack. Baling is done here for \$1.50, for 250-pound bales, the size not affecting the keeping qualities of the hay. It sells for \$10 per ton, on the average. Alfalfa makes superior pasturage for swine, is satisfactory for horses and sheep, and is excellent for cattle. Cattle and sheep bloat, especially in spring and fall. Mild cases may be cured with bicarbonate of soda and exercise, and more dangerous cases are always saved by applying the knife. The straw from which seed has been thrashed is always fed at home to good advantage, but never put on the market. Have had almost as good a yield the first as any year. It is difficult to rid our land of alfalfa when desired. It is the most profitable crop we can raise without irrigation, one year with another.

### Inspecting City Milk Farms.

Dr. J. R. Laine, secretary of the State Board of Health, in his last circular, has the following: "So much has been urged to guard against impurities in milk that it may not be inappropriate to mention in substance a measure that St. Louis proposes. That municipality issues a license to vendors of milk, which stipulates that the right is reserved to inspect the dairy and the methods of caring for animals and the right also to revoke the license if the condition of the cows and the care of the dairy do not meet the requirements of the inspector of the Board of Health. In this way the local Board of Health can exercise supervision over dairies any distance from the city, and, if tuberculous cows are found in the herd, may insist that they be removed or the license to bring milk into the city be revoked."

### Indian Corn in Europe.

The following are the imports of corn into the different countries of Europe during the cereal year ending July 31, 1894, deducting re-exports, as supplied to the Department by U. S. Consul Lathrop at Bristol, England:

|                      | Bushels of 60 Pounds. |
|----------------------|-----------------------|
| United Kingdom.....  | 70,160,000            |
| France.....          | 10,480,000            |
| Germany.....         | 32,720,000            |
| Belgium.....         | 4,800,000             |
| Holland.....         | 6,560,000             |
| Denmark.....         | 1,640,000             |
| Switzerland.....     | 1,712,000             |
| Austria-Hungary..... | 6,424,000             |
| Total.....           | 134,496,000           |

From the above it will be seen that the eight countries mentioned imported during the fiscal year last past over 134,000,000 bushels of corn. Of this amount the United Kingdom took over 70,000,000 and Germany 33,000,000 bushels; France took 10,500,000, and Holland and Austria-Hungary each 6,500,000; Belgium took nearly 5,000,000, and Denmark and Switzerland nearly 1,750,000 bushels each. The bulk of the corn imported into the United Kingdom comes from Roumania and the United States, but Russia, Canada and Turkey, in the order named, are drawn upon to make up about a fourth of the supply. Nearly half of that imported into Germany comes from the United States. America furnishes not more than a fifth of the French supply. In supplying Holland, America is slightly in the lead. The figures given above show a marked increase over the previous year. One of the features of special interest to our own farmers is, that while Argentine

has been cutting a wide swath in the international wheat market, her exports of corn to European countries have fallen off greatly. They aggregated nearly 11,000,000 bushels in 1893, and less than two millions in 1894. It will occasion surprise to some Americans that the little kingdom of Roumania furnished the principal corn-importing countries of Europe more corn than the United States. Roumania supplied 48,000,000 bushels and the United States 46,000,000 in the year 1894.

## THE POULTRY YARD.

### A Hard Competition to Overcome.

TO THE EDITOR:—I was much interested in your article of February 2d concerning a large poultry enterprise; and while I do not wish to dishearten Mr. Finch, and in fact I do not think he is a man who can be easily disheartened, I would like to enlighten him about some of that Eastern egg trade.

I suppose we have all heard of the two broom peddlers—one was sure he could sell brooms cheaper than the other because he stole all of his material, but he threw up the sponge when he found his rival was stealing his brooms all ready made. Now, our Eastern friends do not exactly steal their eggs, but I have it on good authority that they do not cost them anything all summer, and that is the time they rush them in here. On some of those immense farms they will have a lot of chickens that they pay no attention to whatever, but just let them roost in the trees and run wild. When the farmer or his wife needs anything in town, he will tell his children to go hunt eggs, as he is going to town to-day and will take them along. So everybody goes on a grand hunt; and if they come across a nest that is a few weeks old, it is all the same. Everything goes, and the old man takes a bushel or so to the store and exchanges them for calico or whatever is needed. The merchant probably allows him four or five cents a dozen for his eggs and makes 100 per cent on the goods exchanged. The farmer considers that the eggs have cost him nothing, so he is so much in and is happy.

I used to wonder and figure over the fact of eggs coming out here from the East and selling at ten cents per dozen, but I see now how it is done, and we cannot compete against such methods unless we sell direct to consumers, and of course that cannot be done if the ranch is in Sonoma county. But why go so far away from San Francisco? Why not locate in Alameda, Marin or San Mateo counties? Suppose the land is a little higher in price. So is property in the neighborhood of Market and Kearny streets much higher than that of Mission, Minna or Jessie; but a business in the former neighborhood will pay three times as much profit as it would if located away from general travel on the side streets. Mr. Finch certainly knows the advantage of having his poultry plant so near the city of Washington. Why, although the town of Alameda is full of chicken yards, I am confident an active, honest man could sell 2000 dozen eggs per month right here to consumers at five cents per dozen above the highest market price; but in San Francisco I think he would have some trouble to supply the demand.

My plan would be to have a horse and wagon and make a personal canvass to all the residences in the best part of the town. As for broilers, etc., I agree with my friend C. Blom, who, in writing to the *Fanciers' Monthly*, says: "There is a market in San Francisco for good poultry, but it is a small one, and that is already filled to overflowing. The greatest consumers of good poultry are the Jews; but this trade goes through the hands of Jacob Rubenstein or Isaac Solomon, and, as these gentry are not particularly notorious for their overpaying the gentile, you can imagine there is not a fortune to be made at this trade."

The hotel and first-class French restaurant trade is no good. I have investigated; I have been there. There was a time when I had dreams of supplying this trade. I had been collecting for years a scrap-book upon crosses. I had the weights of all the famous crosses that took the ribbons in England—the country noted for its famous crosses. But all interest in this book has gone long ago. The Americanized French restaurant-keeper and his Mongolian chef are a strong combination; and from the class of poultry that I know they buy, I do not doubt the truth of what a friend once told me—that they can take a ten-year-old rooster, spank it, break its bones, keep it for a week, keeping it plentifully sprinkled with celery seed, and dish it up to their customers as "ze zelery capon" to the tune of three dollars a fill up. I never shipped poultry but once to San Francisco. Then I got \$3 per dozen less the commission and express for a lot of fine White Leghorn cockerels. After that I sold direct to consumers—my egg customers—for 50 cents each. I have not a doubt but what Mr. Finch's plant will be very complete wherever he locates it, and hope I may have the pleasure of visiting it after he gets started.

Alameda, Cal.

H. F. WHITMAN.



## THE HOME CIRCLE.

## The Mother Poet.

My mother was a poet!  
And, though she left no song  
To ripple down the centuries  
And cheer the world along.

Her soul was full of music;  
Her thought was set to rhyme  
Of little feet, that kept her heart  
A-singing all the time.

Her life was one long measure  
Of kind, unselfish deeds;  
(So common is the doing  
One scarcely knows or heeds).

She gave herself so freely,  
Thought she had for us all,  
And time to note each flower,  
And the first bluebird's call.

A singer who sings truly  
Must often sing of pain,  
Yet hope rose through her sorrow  
As rainbows through the rain.

Oh, what a wondrous poem  
Is mother duty done!  
My mother was a poet—  
I'm sure that yours was one.

—Mary A. Mason.

## My Valentine.

The postman, on his morning round,  
Left me a Valentine,  
Which makes my heart with rapture bound,  
My eyes with rapture shine.

It does not bear the rainbow's tints,  
You would not call it "fine,"  
There's nothing that so much as hints  
That it's a Valentine.

It seems a modest little note;  
In truth, I will confess  
The little maid bore one word wrote,  
But, oh! that word was "yes."

That word was "yes," and you can guess  
What radiant joy is mine,  
For she will be—oh, happiness!  
My life-long Valentine.

—Johnstone Murray.

## The Fetters of Tradition.

"It's rather pretty, even if it is a bit passe, don't you think? Cousin Jack, who is running a ranch in the West, sent it."

June Westmoreland smoothed down a corner of lace adorning a creation of painted satin that reposed on her lap and looked up at the young man who had just finished buttoning his heavy storm coat.

"Yes—but it is a link in the 'fetters of tradition,' is it not?"

But for the twinkle in his dark eyes, the grave expression in his countenance would have been inscrutably sincere.

She smiled at the quotation of her sweeping depreciation of old ideas in a former discussion. Then her high, delicately-veined forehead was wrinkled in a frown:

"Oh, no! You are carrying my point to a ridiculous extreme, that you may laugh at it. I certainly will not make an issue on the names of the days in the calendar because they are called after pagan gods, or start a club for the banishment of Cupid from art and literature because people once really believed he had the power to impose on them the mental affliction which we call love. As realities they served their purposes—good ones I've no doubt—in their times. As figures of imagination they are yet capable of furnishing a great deal of inspiration. And even the cross makes a very handsome jewel, you know."

She sought the eyes again in the middle of her little speech, and as she met his gaze the enthusiasm of her musical voice fell and died entirely in the last sentence. There was something not to be opposed in the rebuke of the cold, indefinable cynicism of his expression.

One of the things of which he did not approve was enthusiasm.

"Good night." He paused at the door. "I trust you do not think I meant to disparage your valentine."

"Not at all," she replied with a little laugh. "Good night."

A strange friendship was theirs, society said. He was so cold and impenetrable, she so sympathetic and impulsive. But society does not understand much about an intellectual friendship. Once June exclaimed, "I discovered it was the truth," concluding the story of an amusing incident as they rested away from the dancers.

"You discovered a truth?" he questioned, and they drifted into a metaphysical discussion of the thing named Truth, its many counterfeits blindly accepted by the world, and the persistence with which the real has eluded the pursuit of the searchers of all ages. So absorbing was the subject that they took it up again the next time he called, and many times—rather she discussed and he suggested.

If she was not a searcher after Truth, she at least was free from the bondage of priest craft, superstition, religious dogma and traditions, her mind told her, and she would be a searcher some day. Why not? In the realm of thought her will was as certainly her only guide as it was in her daily life, and none presumed to cross it, least of all her old uncle who had been her guardian ever since her parents died when she was a child.

As she half formed this resolve, looking dreamily at the bright stars that gleamed out from the asbestos wall in the grate, through the leaping blue flame, Harry Belden at the littered desk in his work room put the title "My Faith" to a poem, read it through again with evident satisfaction, and mailed it to the "Christian Prospect."

\* \* \* \* \*

"Hello! What's this?"

Miss Westmoreland and Mr. Belden had just stepped from a coach, having returned from the assembly ball on St. Valentine's eve, or morning rather, as the clocks were striking two at that moment. The young man's exclamation was called forth by the sight of a dark bundle lying at the foot of the broad steps.

"It's a child!" He dropped on one knee and gently turned its face from the cold stone to the twilight of the winter night.

"Mercy! Poor little creature, I wonder how she came there." The girl's tones were full of pity. "Come, you must bring her in."

Carefully lifting the thinly clad, inanimate form, he followed June, who had already rung. Lisette sleepily opened the door. Into a cheery room they passed and he carefully deposited his burden on a divan.

The baby's face, white and fixed, told certainly of no more of life than five years. Bending closer, as June softly brushed some tangled golden rings from the closed eyes, he said quietly:

"I know her. She is the daughter of my laundress, and she sometimes comes with her mother. I will go for a physician."

"Yes and her mother," added June, chafing a little palm. "Perhaps there is yet hope."

Back into the city the coach dashed; a stop of a few moments at the first physician's office; then on to police headquarters, where he found the mother nearly wild as she waited in vain for reports from the officers. He returned with her shortly after the arrival of the doctor. June met him at the door.

"She has revived some, but is still unconscious. The doctor says she must not be moved. So you will stay here with her." She addressed the weeping woman.

In the stillness, broken only by the low, sharp cries of the little tot in her delirium, the mother sat by the snowy cot through the long hours and watched and prayed.

\* \* \* \* \*

Mr. Belden's first thought on awakening was of the child, and immediately after luncheon, he set out for the Westmoreland residence. He had a vague idea that he ought to take something—visiting the sick was not part of his daily occupation—and deciding on flowers, he purchased some dozen roses.

The mother, pale from her long vigil, and June wearing a look of deep concern stood by the cot as he entered. The child seemed to be in a deep sleep. June took the box from him with a faint smile, noiselessly arranged the blooms in a vase and then placed the largest one in a dimpled hand lying on the little patient's breast.

As the young man approached, the

blue eyes opened wide and looked straight into his.

"Mister Belden," the voice was pathetically weak—"I brought a valentine for you. Her dress in the pitcher is like the purty lady's who walked wit you. But I got losted an' I'm so tired. Where's mamma?"

"Here, dear."

Hot tears were coursing down the

wan cheeks as she knelt and kissed the

fevered brow.

"In—my—pocket."

Slowly the lashes drooped over the

blue eyes, slowly the curly head sank

back into the soft pillows. And from

the parted lips came the sigh of rest—

sweet rest.

\* \* \* \* \*

As they stole silently away, leaving the grief-shaken figure kneeling there, June put in his hand a small square card printed in gilt and blue, and edged with paper lace, which she had picked up from the floor.

\* \* \* \* \*

It was not a large company that gathered in the unpretentious suburban chapel to participate in the solemn services when a small casket was borne therein the next day—the mother, a few of her friends, four neighbor lads, the pallbearers, a young literary man and a society girl. It was not a fine theological effort, the brief sermon that the white-haired rector delivered standing at the chancel steps. He spoke tenderly of the Redeemer's peculiar love for little ones because he saw in them the pure faith that approaches nearest the ideal. It is ever when the human soul develops its tendencies to sin, its perversities and self-pride, that it is assailed by doubt and unbelief. The life that, through all its years, is graced by its earliest innocence, said the speaker, is sustained through every assault of the enemy; and before its own light, the shadows of error flee away.

It was not a fine theological effort, but it cast a ray of light over the pathway of a new Searcher for the Truth.

In the calm of a beautiful summer morning, June Westmoreland knelt within the same chancel to be numbered with those to whom the cross is the most sacred emblem of the greatest truth. And Harry Belden? No. The writer would probably have it so; but alas for human nature that things do not come out in real life as they do in the story and on the stage.

But the newspapers had mention of an event in the chapel, shortly afterward, far different from that of the sad winter day.

In the young man's literary escriptorio, amid his choicest mementos reposes a gilt and blue penny valentine. He never speaks of "The Fetters of Tradition."—George H. Daugherty.

## Fashion Notes.

The newest skirts have elastics between the flutes at the bottom, to keep them in place, the front being whaleboned half way up to the waist with intervening spaces. This is to keep the material straight and flat in front.

Ostrich feather trimming made of tips is very popular for evening dresses, and comes in sets shaped to outline the neck, with larger feathers to form the sleeves. Among other novelties in dress trimmings is a jet band shaped to edge a yoke, and from this, in front, falls a chenille fringe, tipped two or three inches with jet, which reaches the bottom of the waist.

One of the prettiest skirt models, which is equally appropriate for a walking or a skating costume, has a taffeta silk underskirt lined with horse hair to the knees only, and faced with cloth on the upper side, with four stripes of the cloth running up to the waist to correspond with the openings in the overskirt, which is two inches shorter than the underskirt. This is cut in four gored pieces, which are open to the waist, each piece being bordered with a narrow band of fur, the edge of the underskirt being finished in the same way.

## Men Are Vain.

"It's all very well for you men to go talking about woman's vanity," said a young woman of observation to a New York Sun reporter, "but it has been my experience to find that men are just as vain as women. Indeed, I don't know if I should be guilty of a very great deflection from the perpendicular of veracity if I were to say that men are more vain than women, and that they have been raising all this hue and cry about 'woman's besetting sin' so that they may escape from too marked attention themselves. That's a very old thief's trick, you know."

"Women do spend a great deal of time fixing themselves, I admit. I know I do, and I sometimes feel ashamed of myself for it. But when I find that this is the age of the deification of the body, under the flimsy preaching of *mens sana in corpore sano*, and that men require their women folks to be well groomed from the toenails to the tips of the hair, why, of course, I give in. But if all of this is vanity—and I'm sure that a great deal of it is vexation of spirit—then you fellows are right in the same boat with the rest of us—there now."

"For what, pray, is there in the grand art of titillating which we do that you don't do? You fellows are manicured and pedicured and cuticured, and I don't know what else. You bathe every day, and quite right, too, and take a Turkish bath whenever you feel like it. You give up time either to shave yourselves or be shaved, and you rush away to the barber immediately you see a straggling hair on your neck. You have your mustaches curled, and Jack tells me that he knows of one fellow who sleeps with his done up in pads; you fiddle over your hair and cultivate long locks, little curls, the slick or the poetic, according to your temperament or profession. You keep the run of new neckwear, and read up everything that is said about collars and cuffs. You raise the greatest fuss if your shirts don't set exactly right, and talk like a lot of female owls about the proper cut for a vest. You spend hours picking out clothes, and carry samples of the goods around to show your friends. You get a fit of heart-sickness if your trousers are not properly creased once a week, and the exact shape of the toes of your shoes is a serious matter."

"But, you say, all this is simply following and keeping in with the fashions and rules of health. Exactly, and that is what we girls do. But it's all vanity, just so many exhibitions of vanity. And if you want to come down to a narrower definition and say that you mean pride of person and personal appearance, I shall again say that that's exactly what I mean, and what it all means. It's part and parcel of the same small feelings that leads men to believe that they're looking at things in the store windows when they're really stealing a glimpse in the mirror at the back to see how they look. Pray what do people put mirrors in the hat stands which are intended to hold men's things for if it was not

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DR.  
**PRICE'S**  
CREAM  
**BAKING**  
**POWDER**  
MOST PERFECT MADE.

A pure Grape Cream of Tartar Powder. Free from Ammonia, Alum or any other adulterant.  
40 YEARS THE STANDARD



that they knew the fellows would want to see if they had rumbled their dear hair in taking off their hats? Why, you men are always looking at yourselves and preening yourselves like a lot of great birds.

"Just let me give you a case in point. Last night I went to dinner with a fellow that I really had been thinking quite decently about. I was doing my best to be pleasant, and I thought I was succeeding admirably, for he was one perpetual smile. Surely, I thought, I must be vastly entertaining, when all at once I found out the dreadful truth. He was holding one of the polished plated knives in his hand, so, and was grinning at the reflection of himself in it all the time. I would like to know the woman that could beat that as an exhibition of vanity."

#### Gems of Thought.

Cease to gaze on matter of thy grief.  
—Spenser.

Too much courtesy defeats its object.  
—Phœdrus.

A good intencion clothes itself with sudden power.—Emerson.

Doubt of whatever kind can be ended by action alone.—Carlyle.

Peace is that harmony in the estate that health is in the body.—Clarendon.

Politeness has been well defined as benevolence in small things.—Macaulay.

Reflect upon a clear, unblotted, acquitted conscience, and feed upon the ineffable comforts of the memorial of a conquered temptation.—South.

When what you read elevates your mind and inspires you with high and noble feelings, do not seek for any other rule by which to judge the composition; it is good, made by the hand of an experienced workman.—La Bruyere.

Honor to the true man ever, who takes his life in his hands, and, at all hazards, speaks the word which is given him to utter, whether men will hear or forbear, whether the end thereof is to be praise or censure, gratitude or hatred.—Whittier.

The face is an expression of the soul; and each thought, each expression makes an imperishable impression upon the soul. Every word spoken and every action done in the presence of a human being makes an impression for eternity upon an immortal soul.—Dr. Brooks.

Good sense and good nature are never separated, though the ignorant world has thought otherwise. Good nature, by which I mean beneficence and candor, is the product of right reason, which, of necessity, will give allowance to the failings of others, by considering that there is nothing perfect in mankind; and by distinguishing that which comes nearest to excellency, though not absolutely free from faults, will certainly produce a candor in the judge.—Dryden.

Society has a way of scaling crime and sins that it is pretty difficult to find any warrant for in the Holy Word, and a great deal of it comes from the difficulty which men experience in keeping distinct things which are essentially different, and from confusing things which are essentially distinct. One reason why we regard certain crimes as more wicked than others is because the State punishes them more severely; but that is no safe criterion of their wickedness, inasmuch as what the State punishes a crime for is not its sinfulness, but its harmfulness, to society; and it grades its punishments according to the degree of that harmfulness. That is why it punishes forgery and counterfeiting, for instance, with more extreme penalties than it does petty larceny. The criminality of a crime is according to the degree which that crime is liable to injure society. The sinfulness of a sin is according to the degree in which that sin is an expression of the sinner's indifference or antagonism to the will of God. So that the acts which will be most likely to land a man in jail are not necessarily the acts which will be most likely to land him in hell.—C. H. Parkhurst.

#### Bits of Fun.

The lazier a man is the greater things he is going to do when to-morrow comes.—Ram's Horn.

"Judge," said a lawyer to His Honor during a case on trial, "what do you consider the best illustrated paper?" "A \$1000 bank note," growled the judge.—Tid-Bits.

A Galveston man who had a mule for sale, hearing that a friend in Houston wanted to buy a mule, telegraphed him: "Dear friend, if you are looking for an A No. 1 mule, don't forget me."

The New York Girl: "Lord Dumley, did you ever hear the joke about the museum keeper who had two skulls of St. Paul—one when he was a boy and the other when he was a man?" The Englishman: "No; what is it?—Life.

Little Boy—I like the school ever so much better this term than last.

Mother—I am glad to hear that.

Little Boy—The new teacher is married, and her children goes to our school, and there isn't hardly any rules at all.—Farm and Fireside, Toronto.

"Why, Jimmie, my darling boy, you've got the medal for good behavior this week!" said a fond mother, noting the little silver medal on her son's vest.

"Yessum," said Jimmie. "Tommy Roberts won it, but I told him I'd knock the head off him if he didn't give it to me."—Exchange.

A man up at Nobscot made a wager with a woman that he could thread a needle quicker than she could sharpen a lead pencil. The man won. Time, fourteen minutes and fourteen seconds. It is thought the result would have been different if the woman had not run out of lead pencil inside of five minutes.—Framingham Tribune.

#### DOMESTIC ECONOMY.

**COFFEE CUSTARD.**—Boil one pint of milk with five spoonfuls of sugar. Add a cup of very strong hot coffee, then three beaten eggs and a spoonful of cornstarch or maizena rubbed in cold milk. Stir constantly till it is smooth. When cold pour into cups or glasses, and just before serving ornament the tops with the beaten white of an egg.

**GINGER SNAPS.**—One cup of sugar, and one of butter beaten to a cream, three tablespoonfuls of ginger, one teaspoonful each of cinnamon and cloves, one and one-half cups of molasses, one egg, one teaspoonful of soda dissolved in half a cupful of milk, flour enough to make a dough stiff enough to roll. Roll very thin and bake on a tin sheet crisp and brown.

**BROILED CHICKEN.**—Steam the chicken in a close receiver for twenty minutes. By this means all the juices of the meat will be saved in the dish and the meat will be very tender. About half an hour before putting the chicken on to steam, put the giblets on to cook in just water enough to cover, season with salt and pepper and boil until tender. Then chop them very fine, return to the water and thicken with browned flour. Let it simmer while you are frying the chicken. Take the chicken out of the steamer, turn the juices into the gravy and stir well. Butter the bars of a hot gridiron and place the chicken on it. A few minutes over a clear fire will be sufficient to give it a rich brown. When done lay the chicken on a hot platter, spread with butter, season with salt and pepper and pour on the gravy.

**STEWED TONGUE.**—Carefully wash a fresh tongue and boil it until the skin comes off easily. Strain the water in

which it was boiled. Wash the pot clean, lay in the tongue with enough of the water to cover it. Add two carrots, two onions and one turnip, all cut fine, two ounces of salt pork cut in dice, four sprigs of parsley, two of thyme, one of sweet basil, two bay leaves, three whole cloves, a little allspice, salt and pepper. Cover close and simmer five hours. Half an hour before it is done take out the tongue, strain the gravy, and put both gravy and tongue into a clean saucepan with a tumblerful of red wine and half a bottle of stoneless olives thoroughly drained. When done lay the tongue on a hot platter. Thicken the gravy with a little cornstarch mixed smooth in cold water. Let it boil up till sufficiently thick, then pour over the tongue and serve hot.

**ANGEL CAKE.**—One and one-half tumblerful of granulated sugar, one tumblerful of flour, eleven eggs, one teaspoonful of cream of tartar, mixed with the flour. Sift the flour and sugar separately four times. Beat the whites of the eggs to a stiff froth with a perforated spoon. Add the sugar and beat again, add one teaspoonful of bitter almond, then mix in the flour lightly and quickly, or mix in the sugar with the flour and cream of tartar, and add all at once to the beaten egg. Line the bottom and sides of a cake pan with paper, not greased, pour in the mixture and bake about forty minutes. When done, loosen the cake around the edge and turn out at once, and stand on the side to cool. Frost the top and sides. To make the frosting, put the white of one egg into a tumbler, turn it out into a bowl, and take the same measure of cold water, add the water to the unbeaten white, and stir in sufficient powdered sugar to make it of the right consistency; flavor with a very little bitter almond.

## Patrons of Royal Baking Powder

Are advised to write their orders upon their grocer, specifying the fact that ROYAL BAKING POWDER is wanted, and no other.

Surreptitious efforts are being made by the manufacturers of inferior brands of baking powder to induce clerks and carriers to substitute their goods where consumers are using and desire the Royal.

There is no other compound or mixture that can take the place of ROYAL BAKING POWDER, or that will make cake, biscuit and bread so light, sweet, palatable and wholesome.



Examine the label, and if another brand has been sent you instead of the ROYAL, send it back.





### What Is Electricity?

It is often easier to name the sources from which a well-known thing is derived, and the effects it is capable of producing, than to explain what it really is. Hence the difficulties which have attended all attempts to define electricity are not without precedent or parallel. Faraday, Franklin, Maxwell, Hertz and others have contributed largely to our knowledge in this field, and our impressions of the subject have undergone more or less change; but to-day we are apparently as far as ever from a distinct, positive understanding of the true nature of this mysterious agent. Professor Rowland discusses "Modern Theories of Electricity" in *Engineering Magazine* in an intelligent, if not satisfactory, way; but the best he can do is to offer us negative and fresh problems.

Recognizing the trammels of tradition, and realizing that he cannot offer anything very tangible in the place of what he takes away, he confesses that "we cannot free ourselves from these old theories, and exactly suit our words to our meaning." At the very outset, he insists that "there is nothing more certain to-day than that electricity is not a fluid," and pronounces the term "electric currents" "unfortunate." And then he shows that just as Newton required the existence of an ether, filling all space, to account for the force of gravitation, so we must join Faraday in presupposing that same medium as a means for all the electric and magnetic actions we witness. That these actions occur along what we call "lines of force" or "tubes of force" has long been known. Maxwell's calculations as to the electro-magnetic nature of light and its transmission in waves, wonderfully confirmed by the demonstrations of Hertz, render the ether still more necessary to the solution of the problem. But the question then arises, how can "lines of force" arise in the ether? What is the ether, anyhow? Swift as light and electricity are in their movement through space, their journey from the sun to the earth requires appreciable time—eight minutes, at least; while gravitation acts instantaneously. That is an inexplicable inconsistency. Moreover, the ether does not retard the progress of heavenly bodies moving through it, nor impede the light rays from more distant objects which pass near to planets that might be supposed to attract it, in layers denser than the average, around them. Apparently, then, the ether is without weight, and we are forced to conclude: "Ether, then, is not matter, but something upon which many of the properties of matter depend. \* \* \* Where is the genius who will give us an ether that will reconcile all the phenomena with one another?"

Mother—Johnny, on your way home from school, stop at the store and get me a stick of candy and a bar of soap.

Father—What do you want of a stick of candy?

Mother—That's so he'll remember the soap.—New York Weekly.

### GRASS IS KING.

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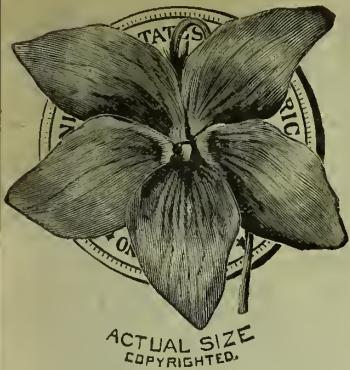
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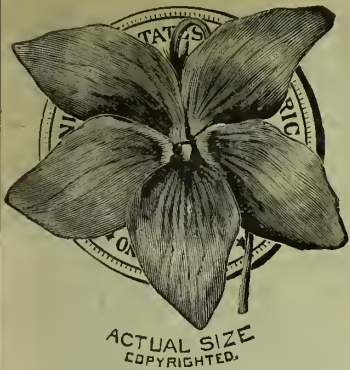
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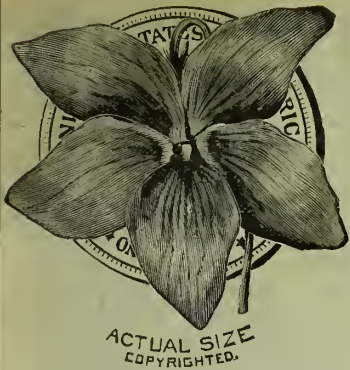
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**THOS. MEHERIN,**  
NURSERYMAN AND SEEDSMAN.  
AGENT FOR THE CALIFORNIA NURSERY CO.

## FRUIT TREES.

Large and Complete Stock of Fruit and Ornamental Trees and Plants, at prices to suit the times.

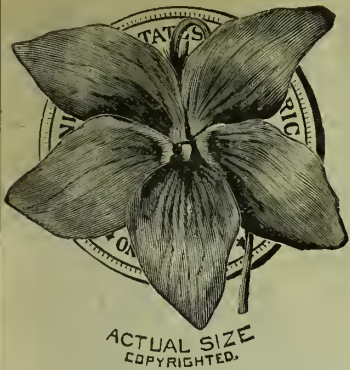
## SEEDS!

GRASS, CLOVER, VEGETABLE, FLOWER AND TREE SEEDS, ETC.

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**THOS. MEHERIN, 516 Battery Street (P. O. Box 2059), San Francisco, Cal.**



# "THE CALIFORNIA" Mammoth New Violet

## FLORAL WONDER OF THE CENTURY

Blooms cover a Silver Dollar. Stems 12 to 14 inches long. Color—clear Violet-Purple.

We gave the Violet its glorious name—"THE CALIFORNIA." We alone have supplied the market with its blooms  
And we now offer the **PLANTS** for sale.

**PRICES—One, 20 cents; Six, 85 cents; Dozen, \$1.50; Hundred, \$7.50**

Plants vigorous and entirely free from Disease.

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## MAMMOTH NEW VIOLET. The California.

Our Grand VIOLET COLLECTION mailed to any address for \$1.00.

—Consisting of—

Plants of the New CALIFORNIA VIOLET. 2 CHRYSANTHEMUMS, assorted.  
ROSES, four varieties. 1 HELIOTROPE.  
CARNATIONS, assorted. 1 FUCHSIA.

All young well-rooted plants.

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## CENTRAL

ALL LEADING VARIETIES OF FRUIT TREES.

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GOOD, THRIFTY STOCK, FREE FROM ROOT  
KNOT AND INSECT PESTS.

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(Successor to Van Gelder & Wylie.)

Write for prices on large and small orders.

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FOUNDED 1865.

85 ACRES.

## Pajaro Valley Nursery.

ALL KINDS OF FRUIT TREES.

DECIDUOUS, ORNAMENTAL AND SHADE TREES, SMALL FRUITS, ETC.

The only nursery offering the true and genuine Loganberry, one of the finest berries ever produced. None can equal it. First introduced and offered for sale at this nursery.

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Clean, Thrifty, Healthy Stock at Prices to Suit the Times.

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## Coast Industrial Notes.

The coast steamship war makes \$4 the present possible passage price from this city to Seattle.

The Chinese Six Companies are getting Chinese on the coast to draw their money and ship it to China.

A tri-weekly line of steamers between Oakland and the Sacramento and San Joaquin river ports is projected.

The Southern Pacific Company has contracted for 700 ventilated fruit cars for use next season. They will not require the use of ice.

A syndicate of capitalists is reported to have offered the Government \$33,000,000 for its entire claim against the Union Pacific Railroad.

Redo & Co. are reported about to put on a line of freight steamers between Mexican and South American ports in opposition to the Pacific Mail Steamship Co.

There are now in California 675,000 tons of wheat. The loss to the State by the depreciation in the price of wheat for the last three years aggregates \$22,500,000.

Grain freights out of San Francisco are quoted at 21 shillings. There are now \$3,767 tons of disengaged bottoms in port, as against 43,933 tons at the same time last year.

The Northern Pacific receiver's report for November shows balance for October, \$1,378,917; receipts, \$3,806,338; disbursements, \$2,160,577; balance to December, \$1,735,760.

Active arrangements are in progress for a steamship line between Portland and the Orient, to be operated in connection with the O. R. and N. Company and the Great Northern railroad.

The Mendocino Lumber Co. have cut the wages of their employees twenty per cent. This, they claim, puts the wages they pay equal to the rate paid during '94 by other companies.

The ice crop in the Truckee river, representing a present invested capital of \$600,000, is now being "harvested." It is Truckee's only winter industry and gives employment to a large number of men.

On the Mexican international railway construction has commenced on the branch from Monclova west to the mining town of Sierra Mojada, about 160 miles. The line was partially graded in 1892. Work has also been commenced on the branch from Riata south-east to Monterey, 60 miles.

The total expenditure of the Escondido irrigation system to date has been \$136,408.10. The cash receipts from the sale of bonds have been \$151,070, leaving a balance of \$14,661.90 on hand. There is \$76,440 due on bonds, and this, with the amount on hand, leaves \$91,101.90 as the sum available for completion of the system.

There are sixty-six hot springs in Nevada and a belt of hot water underneath the State, which, if tapped by artesian wells, would prove of great commercial benefit to the State. Past legislatures have attempted to foster the enterprise by paying bounties to successful artesian well sinking, but they were too small to be of any practical good.

The Californian Water Works and Irrigation Co., Ltd., is an English corporation operating in Inyo Co. About eight miles of canal are now under active construction, of which several miles are completed. The total length of canal will be eighty-three miles, and it is estimated that it will irrigate 332,000 acres of land. It is expected that eighteen miles of the canal will be finished by next spring.

The scheme to tap and partially drain Goose lake, which is situated in this State and in Oregon has several times been agitated and met by strong opposition. Now it comes up in the shape of a bill introduced by Congressman Geary, granting the right of way to construct a canal from the lower end of the lake, in a southeasterly and south-westerly direction to Upper Pitt river, for irrigation and other purposes.

The coast line of the S. P. R. R. has reached a point on the coast. The track has reached Pismo beach at the townsite of Grover—the first place south of San Francisco where the road actually comes down to the ocean front. The work will be pushed forward without delay under the present contract, and through connection between San Francisco and Los Angeles will be made during the coming year.

The Colorado River Irrigation Co. has a mammoth scheme to reclaim an arid region of 1,000,000 acres in southern California and 500,000 acres in Baja California, reaching from Indio, San Bernardino Co., to the Gulf. It is proposed to begin work on the main canal next week. It will be 250 miles long, and for the first twelve miles will be 156 feet wide, carrying ten feet of water. The initial point is "Pot Holes," about ten miles from Yuma. The water to be used is from the Colorado river.

The two largest locomotives in America go into the service of the Southern Pacific Co. on the mountain division next week. The weight of each engine without the tender is 169,000 pounds; the total weight, ready for service, is 250,000 pounds. The driving wheels, of which there are four pairs, are fifty-one inches in diameter. The boilers are seventy-two inches in diameter, the steam cylinders twenty-two inches, with a twenty-six-inch stroke. The locomotives exceed in size and strength the "de capods" used on the "switchback" division of the N. P. R. R. some years ago, and will be used in the Tehachapi and Sierra Nevadas.

During the season of '94 the Cutting Fruit Packing Co. of Colton, Cal., bought of the fruit growers 2,955,553 pounds of green fruit,

for which they paid out \$25,116.74, or an average of nearly \$20 per ton. For labor in handling this fruit they paid out \$19,335.20, most of which was kept right at home and was distributed where it would do the most good. The company packed for the season 1,083,000 cans of fruit and their shipments for the season up to date are 181 carloads of dried and canned fruits.

## Beware of Ointments for Catarrh that contain Mercury.

As mercury will surely destroy the sense of smell and completely derange the whole system when entering it through the mucous surface. Such articles should never be used except on prescriptions from reputable physicians, as the damage they will do is tenfold to the good you can possibly derive from them. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, O., contains no mercury, and is taken internally, acting directly upon the blood and mucous surfaces of the system. In buying Hall's Catarrh Cure be sure you get the genuine. It is taken internally, and made in Toledo, Ohio, by F. J. Cheney & Co. Testimonials free. Sold by Druggists; price, 75c. per bottle.

The Spokane Chronicle says that the country extending from Spokane to the Sound has been hard hit by the dull times. At Spokane former millionaires are penniless, with nothing to do. It is said of one man, who owned a brick block, that he is now glad to get the janitorship of the building he formerly owned. Another man, who had a salary of \$500 per month and owned a vast deal of property, is without a cent and keeps himself employed by keeping books, without pay. One informant said that one man was especially happy because he owed only \$5000.

## The "Acme" Harrow.

No end of inventive genius has been expended on harrow improvements, but to the inventor of the "Acme" Pulverizing Harrow, Clod Crusher and Leveller, is due the credit of producing the one perfect all-around implement. The "Acme" in one operation cuts, crushes, lifts, turns, smooths and levels—not only preparing a perfect seed bed, but covering the seed, even better than a drill. It is made entirely of cast steel and wrought iron, any is practically indestructible. The manufacturer, Duane H. Nash, Millington, N. J., and Chicago, Ill., claims that this is the only harrow on earth that will cultivate or work the entire surface of the ground between the coulters. He has published a book fully describing the "Acme" and containing an article, "Why the Harrow is a more important implement than the plow, etc.," by Henry Stewart, which is sent free to all who apply.

## St. Jacobs Oil is made to cure RHEUMATISM

## ASPINWALL POTATO-PLANTER

We manufacture the celebrated Aspinwall Potato Planter, Aspinwall Potato Cutter, Aspinwall Paris Green Sprinkler, etc. Every machine warranted. These machines greatly reduce the cost of raising potatoes. Send for Free Illustrated Catalogue. ASPINWALL MANUFACTURING CO., 48 Sabin St., Jackson, Mich. HOOKER & CO., Agents, 16 and 18 Drumm Street, San Francisco, Cal.

## Protect Your Trees



### Gilman's Patent Tule Tree Protector.

PATENTED AUGUST 1, 1893.

FIRST PRIZE—Medal and Diploma—California Mid-Winter International Exposition. Cheapest, best and only one to protect trees and vines from frost, sunburn, rabbits, squirrels, borers and other tree pests. For testimonials from parties who are using them, send for descriptive circulars.

B. F. GILMAN,

Sole Manufacturer of Patent Tule Covers. 420 Ninth Street, San Francisco, Cal.

## FRANCIS SMITH & CO.,

—MANUFACTURERS OF—

## SHEET IRON & STEEL PIPE

FOR TOWN WATER WORKS.

Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes. 130 BEALE STREET, SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.

## Weber Gas & Gasoline Engines.

Simplest and most economical engines on earth.

FULLY GUARANTEED.

Requires only a few minutes' attention a day. Guaranteed cost of running, 1 cent per hour per H. P.

JOSHUA HENDY MACHINE WORKS,

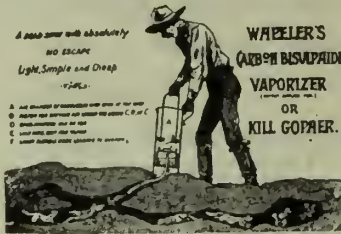
AGENTS,

42 & 44 Fremont Street

San Francisco, Cal.

## 5/A HORSE BLANKETS ARE THE STRONGEST.

Made in 250 Styles. For either road or stable use. All shapes, sizes and qualities. WM. AYRES & SONS, PHILADELPHIA.



### Destroy the Gophers!

You may now grow alfalfa on the uplands and save garden, trees and flowers. Price \$2. Sold by the trade or by manufacturer of

WHEELER'S CARBON BISULPHIDE, Utah and Alameda Sts., San Francisco.

### Price's Traction Engine.



We have one of these engines that was used about one month last season and was taken back by us by reason of illness of purchaser. Engine is in perfect order, and in better working order than when first sent from the factory. A BARGAIN. Indicated power, 80-horse; Cylinders, 8x8; Wheels, 8 ft. high, 28 in. wide; weight, less than 10 tons. Price when new, \$4500.

HOOKER & CO.,

16 and 18 Drumm Street, San Francisco.

## GRANGERS' BANK

OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 1874.



Capital Paid Up.....\$1,000,000  
Reserve Fund and Undivided Profits, 130,000  
Dividends Paid to Stockholders..... 832,000

#### —OFFICERS—

A. D. LOGAN.....President.  
I. C. STEELE.....Vice-President.  
ALBERT MONTELLIER.....Cashier and Manager.  
FRANK McMULLEN.....Secretary.

General Banking. Deposits Received. Gold and Silver. Bills of Exchange Bought and Sold. Loans on Wheat and Country Produce a Specialty.

January 1, 1894. A. MONTELLIER, Manager.

## THE Porteous Improved Scraper.

Patented April 3, 1883. Patented April 17, 1883.



Manufactured by G. LISSENDEN.

The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Leveling Land, Road Making, etc.

This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

This Scraper is all Steel—the only one manufactured in the State.

Price, all Steel, four-horse, \$40; Steel, two-horse, \$31. Address all orders to

G. LISSENDEN, STOCKTON, CAL.

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OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library, containing official American reports, with full copies of U. S. patents since 1873. All worthy inventions patented through Dewey & Co's Patent Agency will have the benefit of a description in the *Mining and Scientific Press*. We transact every branch of patent business, and obtain patents in all countries which grant protection to inventors. The large majority of U. S. and foreign patents issued to inventors on the Pacific Coast have been obtained through our agency. We can give the best and most reliable advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free.

DEWEY & CO., Patent Agents,

220 Market St., San Francisco.

GEORGE H. STRONG, Manager.



## S. F. MARKET REPORT.

## Market Review.

SAN FRANCISCO, Feb. 20, 1895.

**FLOUR**—We quote: Net cash prices for Family Extras, \$3 25@3 35 ¢ bbl; Bakers' Extras, \$3 15@ \$3 25; Superfine, \$2 10@2 40 ¢ bbl.

**WHEAT**—Offerings are not large, while the demand is moderate. At the same time there are willing buyers at a range of \$1 14@1 24 ¢ cwt for good to choice shipping grades, and possibly \$3 30 would be paid for something of fancy character. Milling descriptions are not strong, and all wants are satisfied at \$6 14@90 ¢ cwt. Walla Walla Wheat is quotable at 75¢@77¢ for fair average quality, 78¢@81¢ for bluestem and 70¢@72¢ for damp.

**BARLEY**—The tone of the market is of soft character, with trade slow and unsatisfactory. Local wants are small and there is next to nothing doing in the shipping way. Dullness and care are to be expected under such circumstances. We quote: Feed, fair to good, 72¢@73¢; choice, 75¢; Brewing, 85¢@90 ¢ cwt.

**OATS**—No heavy supplies are coming forward, but there are stocks on hand more than ample to meet the current demand, which is neither brisk nor general. Prices are kept in position simply because there is no selling pressure, and also because much stock is concentrated in strong bands. We quote consignments as follows: Milling, \$1 02 1/2 @ 1 15; Surprise, \$1 05 @ 1 15; fancy feed, \$1 05 @ 1 15; good to choice, 95¢@1 ¢; fair to good, 90¢@95¢; poor to fair, 82¢@87¢; Black, \$1 15 @ 1 30; Red, \$1 05 @ 1 17 1/2; Gray, 96¢@97 1/2 ¢ cwt.

**CORN**—Light shipments were made on the Panama steamer which sailed yesterday. We quote: Large Yellow, \$1 20 @ 1 22 1/2; small Yellow, \$1 25 @ 1 27 1/2; White, \$1 20 @ 1 22 1/2 ¢ cwt.

**RYE**—Quotable at 85¢@90 ¢ cwt.

**BUCKWHEAT**—Quotable at 80¢@85 ¢ cwt.

**CRACKED CORN**—Quotable at \$35 50 @ 27 ¢ ton.

**CORNMEAL**—Millers quote feed at \$25 to \$26 50 ¢ ton; fine kinds for the table in large and small packages, 3¢@3 1/2 ¢ lb.

**OILCAKE MEAL**—Quotable at \$25 ¢ ton from the mill.

**COTTONSEED OILCAKE**—Quotable at \$24 ¢ ton.

**MIDDINGS**—Quotable at \$18 @ 19 ¢ ton.

**BRAN**—Quotable at \$12 @ 13 50 ¢ ton.

**GROUND BARLEY**—Quotable at \$17 @ 18 ¢ ton.

**VARIOUS**—We quote: Rye Flour, 3 1/2 ¢; Rye Meal, 3¢; Graham Flour, 3¢; Oatmeal, 4 1/2 ¢; Oat Groats, 5¢; Cracked Wheat, 3 1/2 ¢; Buckwheat Flour, 5¢; Pearl Barley, 4 1/2 @ 4 3/4 ¢ lb.

**HAY**—A car of fancy Wheat occasionally sells at \$12 ¢ ton. The market, as a rule, shows easy feeling, receipts being sufficient for the demand. Wire-bound Hay sells at \$1 ¢ ton less than rope-bound Hay. Following are the wholesale city prices for rope-bound Hay: Wheat, \$9 @ 11 50; Wheat and Oat, \$8 50 @ 11; Oat, \$9 @ 11; Alfalfa, \$8 @ 10; Barley, \$8 @ 10; Clover, \$9 @ 10; compressed, \$8 50 @ 11; Stock, \$8 @ 9 ¢ ton.

**STRAW**—Quotable at 70¢@80 ¢ bale.

**FEED**—Manhattan Horse Food (Red Ball Brand) in 100-lb. cabinets, \$8; Manhattan Egg Food, 100-lb. bags, \$11 50.

**BEANS**—Colored kinds are still neglected and weak, while Whites are receiving some little more attention and show steadier tone, without any positive change for the better in prices. We quote as follows: Bayos, \$1 75 @ 1 90; Butter, \$1 75 @ 1 80 for small and \$2 @ 2 25 for large; Pink, \$1 10 @ 1 35; Red, \$1 60 @ 1 65; Lima, \$1 10 @ 1 25; Pea, \$2 25 @ 2 50; Small White, \$2 25 @ 2 55; Large White, \$2 10 @ 2 30; Blackeye, \$2 75 @ 3; Red Kidney, \$2 75 @ 3; Horse, \$1 60 @ 1 70 ¢ cwt.

**DRIED PEAS**—We quote: Green, \$1 50 @ 1 60; Niles, \$1 20 @ 1 40 ¢ cwt.

**SEEDS**—Mustard not in demand. Some little inquiry prevails for Alfalfa, supplies of which are not large. We quote as follows: Mustard, Brown, \$1 50 @ 1 75; Yellow, \$2 @ 2 37 1/2; Tiesie, \$1 75 @ 2 20; Canary, 3¢@4¢; Hemp, 3 1/2 @ 4 1/4 ¢; Rape, 1 1/2 @ 2 1/4 ¢; Timothy, 5 1/2 @ 6 1/2 ¢; Alfalfa, 8¢@8 1/2 ¢ lb; Flax, \$2 25 @ 2 50 ¢ cwt.

**POTATOES**—The market is well stocked with old varieties, but there is good demand for choice stock and full rates are obtained for such an article. We quote as follows: New Potatoes, 1 1/2 @ 2 ¢ lb; Early Rose, 45¢@60¢; River Reds, 30¢@30¢; Burbanks, 30¢@45¢; Oregon Burbanks, 40¢@40¢; Salinas Burbanks, 75¢@81¢; Sweeties, 50¢@51¢ for Rivers and \$1 25 @ 1 75 ¢ cwt for choice stock.

**ONIONS**—Quotable at 80¢@1 10 ¢ cwt. for desirable offerings. Cut Onions sell lower.

**VARIOUS**—Cucumbers are cheaper. Chile peppers continue low in price, being plentiful. Receipts yesterday included 27 bxs Asparagus, 10 bxs Rhubarb and 3 sks. Green Peas. We quote as follows: Hothouse Cucumbers, 50¢ @ 1 ¢ dozen; Asparagus, 15¢@25 ¢ lb; Rhubarb, \$1 75 @ 2 ¢ box; String Beans, 10¢@12 1/2 ¢ lb; Green Peas, 50¢ @ 55 ¢ lb; Green Peppers, 2¢@3 ¢ lb; Turnips, 50¢ @ 55 ¢ cwt; Beets, 60¢@75 ¢ sack; Carrots, 30¢@50¢; Cabbage, 30¢@40 ¢ cwt; Garlic, 30¢@3 1/2 ¢ lb; Cauliflower, 30¢@40 ¢ dozen; Dried Peppers, 12 1/2 @ 15 ¢ lb; Dried Okra, 12 1/2 ¢ lb.

**FRESH FRUIT**—There is fair demand for Apples, but offerings are large enough for all demands and prices show no marked change. We quote: Apples, 40¢@1 ¢ per box, with \$1 25 for fancy.

**CITRUS FRUIT**—Arrivals of Oranges have not been particularly heavy, though sufficient to meet all wants, trade not being brisk. Auction sales continue to be held regularly three times a week. We quote: California Navels, \$1 50 @ 2 50; Seedlings, 90¢@1 50 ¢ box; Mexican Limes, \$5 50 @ 6; California Limes, in small boxes, 50¢@75 ¢ box; Lemons, Sicily, \$3 @ 3 50; California Lemons, 75¢@1 25 for common and \$1 50 @ 2 50 for good to choice.

**DRIED FRUIT**—There is more or less inquiry, but it is not of very pronounced character. Peaches seem to be more in favor at the moment than anything else.

Following are the prices furnished by the Fruit Exchange. The figures presented represent carload lots, small parcels occasionally selling at slightly lower rates:

Apricots—Fancy Moorpark, 8 1/2 ¢; choice, do, 8¢; fancy, 7 1/2 ¢; choice, 7¢; standard, 6 1/2 ¢; prime, 6¢. Apples—Evaporated, 5 1/2 @ 7¢; sun-dried, 4 @ 5¢. Peaches—Fancy, 70¢; choice, 6 1/4 ¢; standard, 5 1/2 ¢; prime, 5 1/4 ¢; peeled, in boxes, 12 @ 13¢. Pears—Fancy, halves, 5 1/4 ¢; quarters, 4 1/2 ¢; choice, 4 1/4 ¢; standard, 3 1/2 ¢; prime, 3¢. Plums—Pitted, 4 @ 5¢; unpitted, 1 1/2 @ 2¢. Prunes—Four sizes, 4 1/2 @ 4 3/4 ¢. Nectarines—Fancy, 7¢; choice, 6 1/2 ¢; standard, 6¢; prime, 5 1/2 ¢. Figs—White, choice, 5 @ 5 1/4 ¢; Black, choice, 1 1/2 @ 2¢.

Raisins—In sacks (50-lb. boxes selling at 1 1/2 ¢ lb. higher); 4-crown, loose, 4¢; 3-crown, 3 1/2 ¢; 2-crown, 2¢; seedless Sultanias, 30¢; seedless Muscadelis, 20 ¢ lb; 8-crown London Layers, \$1 25 ¢ box in 20-lb. boxes; clusters, \$1 50; Delmas plu-

ters, \$2; Imperial clusters, \$3; 4-crown, loose, \$1 15; 4-crown, loose, faced, \$1 25 ¢ box. Dried Grapes—1 1/2 ¢ lb.

**NUTS**—Market quiet. No changes of consequence. We quote: Chestnuts, 7¢@8¢; Walnuts, 5¢@7¢ for hard shell, 7¢@9¢ for soft shell and 7¢@9¢ for paper shell; California Almonds, 5¢@7 1/2 ¢ for soft shell, 3¢@4¢ for hard shell and 8¢@9¢ for paper shell; Peanuts, 4¢@6¢; Hickory Nuts, 5¢@6¢; Filberts, 8¢@9¢; Pecans, 6¢ for rough and 8¢ for polished; Brazil Nuts, 7¢@7 1/2 ¢ lb; Cocoanuts, \$5 @ 5 50 ¢ 100.

**HONEY**—Trade is rather slow. Prices are undisturbed. We quote: Comb, 10¢@12¢; water white extracted, 7¢; light amber extracted, 5 1/2 @ 6¢; dark amber, 5 @ 5 1/2 ¢ lb.

**BUTTER**—There is more or less surplus stock on the market, for which there is no outlet, and prices are very weak in consequence. We quote: Creamery—Fancy, 18¢@19¢; seconds, 17¢@18¢; imitation, 15¢@16¢. Dairy—Fancy, 14 1/2 @ 15¢; good to choice, 12 1/2 @ 14¢; fair, 10¢@12¢; store lots, 8¢@9¢.

**CHEESE**—Stationary in price, though lower figures are not unlikely in the near future. We quote: Choice to fancy, 8¢@9¢; fair to good, 6¢@7¢; Eastern ordinary to fine, 11¢@14 ¢ lb.

**EGGS**—Buyers have every advantage just now. Supplies are coming in freely, and prices have been steadily dropping until a pretty low basis is now reached, while it is doubtful if bottom figures have yet been touched. We quote: California Ranch, 16 1/2 @ 17 1/2 ¢; store lots, 15¢@15 1/2 ¢ dozen.

**POULTRY**—No demand for Turkeys, either live or dressed. Choice young Roosters, Fryers and large Broilers are about the only kinds that sell well just now. We quote: Live Turkeys—Gobblers, 8¢@9¢; Hens, 8¢@9 ¢ lb; dressed Turkeys, 10¢@11 ¢ lb; Roosters, \$3 @ 3 50 for old, and \$6 @ 7 for young; Broilers, \$3 @ 4 for small and \$4 50 @ 5 for large; Fryers, \$5 @ 6; Hens, \$3 50 @ 4 50; Ducks, \$5 @ 6; Geese, \$1 50 @ 1 75 ¢ pair; Pigeons, \$1 50 @ 1 75 for old and \$2 @ 2 25 ¢ dozen for young.

**GAME**—The season is nearly over. Receipts are none too large for the demand and prices hold up fairly well. We quote: Robins, 50¢; Quail, \$1 50 @ 1 75; Canvasback, \$2 50 @ 3; Mallard, \$3 @ 3 50; Sprig, \$1 75; Teal, \$1 50 @ 1 75; Widgeon, \$1 50; small Ducks, 75¢@1 ¢; English Snipe, \$2 50 @ 3; common Snipe, \$1 25 @ 1 50; Brant, \$1 25 @ 1 50; Gray Geese, \$2 @ 2 50; White Geese, \$1 @ 1 25; Rabbits, \$1 @ 1 50; Hare, 75¢@1 ¢ per dozen.

**CURED MEATS**—We quote: Eastern Sugar-cured Hams, 10 1/2 @ 11 ¢ lb; California Hams, 9 1/2 @ 10¢; Bacon, Eastern, extra light, sugar-cured, 13¢; medium, 8 1/2 @ 9¢; do, light, 9¢@10¢; extra light, 11¢@12 ¢ lb; Pork, extra clear, bbls, \$17 50 @ 18 50; half bbls, \$8 50 @ 9 50; Pig Pork, bbls, \$20 @ 21; hf bbls, \$10 @ 11; Pigs' Feet, hf bbls, \$4 50; dry salted Pork, 8 1/2 @ 9 ¢ lb; Beef, mess, bbls, \$7 @ 7 50; do, extra mess, bbls, \$8 @ 8 50; do, family, \$10; extra, do, \$10 50 @ 11 ¢ bbl; do, smoked, 9¢@10¢; Pickled Tongues, hf bbls, \$7.

**LARD**—We quote as follows: Eastern Lard, compound, tierces, 6 1/2 @ 6 3/4 ¢; do, prime, steam, 8 1/2 ¢; Eastern, pure, 10-lb pails, 9 1/2 ¢; 5-lb pails, 9 1/2 ¢; 3-lb pails, 9 1/2 ¢; California, 10-lb tins, 7 1/2 @ 8¢; do, 5-lb, 8¢@8 1/2 ¢; California pure, in tierces, 7 1/2 @ 8¢; do, compound, 6 1/4 @ 6 1/2 ¢ for tierce.

**WOOL**—Not a feature of interest to the market. Quotations nominal. We quote Fall:

Free Northern..... 7 @ 8 1/2 ¢  
Northern, defective..... 5 @ 7  
Southern & San Joaquin, light and free..... 5 @ 6  
Do, defective..... 3 @ 4

**HOPS**—Very light inquiry. Choice offerings are quite scarce. Quotable at 4¢@8 ¢ lb, as to quality.

**HIDES AND SKINS**—Quotable as follows:

|                                                                                                                                                                                                                                                                                                                                                                                                                | Sound.          | Culis.          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------|
| Heavy Steers, 56 lbs up, ¢ lb.....                                                                                                                                                                                                                                                                                                                                                                             | 6 @ 6 1/2 ¢     | 5 @ 5 1/2 ¢     |
| Medium Steers, 48 to 56 lbs.....                                                                                                                                                                                                                                                                                                                                                                               | 5 @ 5 1/2 ¢     | 4 @ 4 1/2 ¢     |
| Light, 42 to 47 pounds.....                                                                                                                                                                                                                                                                                                                                                                                    | 4 1/2 @ 4 1/2 ¢ | 3 1/2 @ 3 1/2 ¢ |
| Cows, over 50 lbs.....                                                                                                                                                                                                                                                                                                                                                                                         | 5 @ 5 1/2 ¢     | 4 @ 4 1/2 ¢     |
| Light Cows, 30 to 50 lbs.....                                                                                                                                                                                                                                                                                                                                                                                  | 4 1/2 @ 4 1/2 ¢ | 3 1/2 @ 3 1/2 ¢ |
| Stags.....                                                                                                                                                                                                                                                                                                                                                                                                     | 3 @ 3 1/2 ¢     | 2 @ 2 1/2 ¢     |
| Kips, 17 to 30 lbs.....                                                                                                                                                                                                                                                                                                                                                                                        | 4 1/2 @ 4 1/2 ¢ | 3 @ 3 1/2 ¢     |
| Veal Skins, 10 to 17 lbs.....                                                                                                                                                                                                                                                                                                                                                                                  | 5 1/2 @ 5 1/2 ¢ | 4 @ 4 1/2 ¢     |
| Calf skins, 5 to 10 lbs.....                                                                                                                                                                                                                                                                                                                                                                                   | 7 @ 7 1/2 ¢     | 6 @ 6 1/2 ¢     |
| Dry Hides, usual selection, 9¢@9 1/2 ¢; Dry Kips, 7 1/2 ¢; Calf Skins do, 12¢@13¢; Cull Hides, Kip and Calf, 6¢@8¢; Pelts, Shearlings, 10¢@20¢ each; do, short, 25¢@35¢ each; do, medium, 30¢@45¢ each; do, long wool, 40¢@60¢ each; Deer Skins, summer, 25¢@30¢; do, good medium, 15¢@25¢; do, winter, 10¢ @ 15¢; Goat Skins, 20¢@35¢ apiece for prime to perfect, 10¢@20¢ for damaged, and 5¢ each for Kids. |                 |                 |

**TALLOW**—We quote: Refined, 5 1/2 @ 6¢; rendered, 4¢@4 1/4 ¢; country Tallow, 3 1/2 @ 4¢; grease, 3¢ @ 4¢.

## MEAT MARKET.

Spring Lamb is scarce. Good supply of about everything else. Following are the rates for whole carcasses from slaughterers to dealers:

**BEEF**—First quality, 5¢@5 1/2 ¢; second quality, 4 1/2 ¢; third quality, 3 1/2 @ 4 ¢ lb.

**CALVES**—Quotable at 4 1/2 @ 5 1/2 ¢ for large and 5¢@7 ¢ lb. for small.

**MUTTON**—Quotable at 5 1/2 @ 6 1/2 ¢ lb.

**LAMB**—Quotable at 6 1/2 @ 8 ¢ lb. for yearlings; Spring Lamb, 12 1/2 @ 15¢.

**PORK**—Live Hogs, on foot, grain fed, heavy and medium, 3 1/2 ¢; small Hogs, 4¢; dressed Hogs, 5 1/2 @ 6 1/4 ¢ lb.

We have 15,000 miles of coast line, a fact which enables almost every part of the country to be within easy reach of a port of export.

## Complete Fertilizers

for potatoes, fruits, and all vegetables require (to secure the largest yield and best quality)

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Results of experiments prove this conclusively. How and why, is told in our pamphlets.

They are sent free. It will cost you nothing to read them, and they will save you dollars.

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P. & B. ROOFING.

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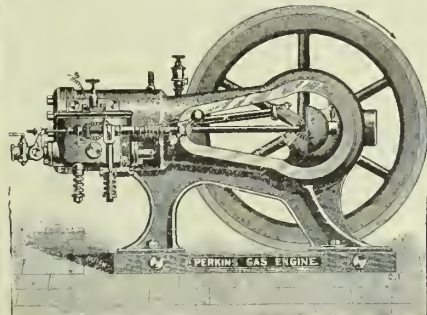
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Also PUMPING MACHINERY.

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PERKINS PUMP & ENGINE CO.,

117 Main St., San Francisco.

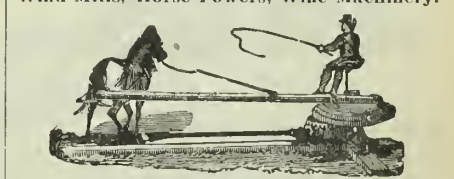


Makes a clean sweep of Two Acres at a sitting. A man, a boy and a horse can operate it. No heavy chains or rods to handle. The crop on a few acres the first year will pay for the machine. Send postal card for illustrated Catalogue, giving price, terms, testimonials, also full information concerning our Iron Giant Grub and Stump Machine, Two Horse Hawkeye and other appliances for clearing timberland. Address: MILNE MANUFACTURING CO., 641 8th St., Monmouth, Ill. Sunnyvale Shetland Pony Farm. For catalogue address Milne Bros. at above office and number. Breeders of Pure Shetland Ponies.

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## POULTRY AND STOCK BOOK.

NILES' manual and reference book on subjects connected with successful Poultry and Stock Raising on the Pacific Coast. Over 100 pages, profusely illustrated with handsome, lifelike illustrations of the different varieties of Poultry and Live Stock. Price, postpaid, 50 cents. Address PACIFIC RURAL PRESS Office, San Francisco, Cal.

## "ACME" PULVERIZING HARROW, CLOD CRUSHER and LEVELER.



Variety of sizes suitable for all work.

Adapted to all soils and all work.—Flat crushing spurs pulverize lumps, level and smooth the ground, while at the same time curved coulters cultivate, cut, lift and turn the entire surface of the soil. The backward slant of the coulters prevents tearing up rubbish and reduces the draft.

Made entirely of cast steel and wrought iron—PRACTICALLY INDESTRUCTIBLE.

Cheapest Riding Harrow on Earth.

Sells for about the same as an ordinary drag.

An extensive fruit grower in Fresno County says:—"The 'ACME' Harrow has the past season in our orchard proved that it is the 'boss' of all. Candidly we are convinced that it saved our orchards in the past dry season by placing the surface in good order which answered as a mulch and retained what moisture fell during the winter and spring of 1894. We can show a growth on apple trees this dry season of 7 feet and over. We only had 2 1/2 inches of rain to produce this growth. We did this, we believe, by the use of the 'ACME' Harrow, and cheerfully recommend it in preference to any tool made for a cultivator."

N. B.—I deliver free on board at PORTLAND and SAN FRANCISCO.

DUANE H. NASH, Sole Manufacturer, MILLINGTON, N. J. and 30 South Canal Street, CHICAGO, ILL.

(Mention This Paper.)



## List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey &amp; Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING FEBRUARY 5, 1895.

533,521.—PETROLEUM FURNACE—Wm Booth, S. F.  
 533,788.—RIFLE—A. S. Cooper, Santa Barbara, Cal.  
 533,792.—BUTTON-HOLE GUIDE—C. Dobson, S. F.  
 533,587.—PRESERVING TIMBER—J. S. George, New York, Oreg.  
 533,642.—CAN OPENER—J. Gould Jr., S. F.  
 533,803.—BOILER FEEDER—M. Gregson, Philomath, Oreg.  
 533,534.—SAWMILL SET WORKS—D. B. Hanson, S. F.  
 533,645.—CARAMEL BOX—W. E. Henry, S. F.  
 533,646.—ROTARY ENGINE—R. Hewson, S. F.  
 533,466.—CUTTER GUIDE—Howard & Scoggan, Oregon City, Oreg.  
 533,716.—FRUIT GRADER—Luce & Baumgrover, Los Gatos, Cal.  
 533,823.—BOOTHACK—J. I. E. Nelson, Cedar Home, Wash.  
 533,666.—PAINT REMOVER—Phibbs & North, S. F.  
 533,720.—DREDGER SPID GEAR—W. B. Piess, Stockton, Cal.  
 533,740.—DREDGER—W. B. Piess, Stockton, Cal.  
 533,741.—DREDGER HOSE GUARD—W. B. Piess, Stockton, Cal.  
 533,687.—FIRE ESCAPE—H. F. & L. Pokorny, Seattle, Wash.  
 533,669.—HOISTING APPARATUS—L. Rosenfeld, S. F.  
 533,610.—ELECTRIC RAILWAY—A. Rosenholz, S. F.  
 533,687.—BAKING SUPPORT—R. Walker, Oakland, Cal.  
 533,768.—HORSE POWER—E. J. Wood Beckwith, Cal.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible by mail or telegraphic order. American and Foreign patents obtained, and general patent business for Pacific Coast Inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

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Twenty or Fifty Acres of a

## Fruit Ranch

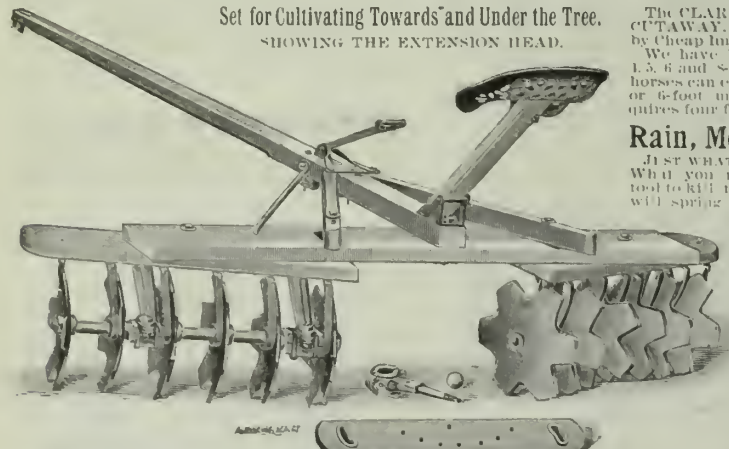
In Lagoon Valley, near Vacaville, Solano County, Cal. French Prunes, Bartlett Pears and Cherries in full bearing. House with modern improvements.

C. H. STEINMETZ,

Vacaville California  
 Or 126 Kearny Street, San Francisco.

## The Reversible or Fruit-Growers' and Orchard Harrow.

Set for Cultivating Towards and Under the Tree.  
 SHOWING THE EXTENSION HEAD.



IT WILL DO IT, TOO, and do it better than any other tool you have or can get. We furnish without extra charges with the 4, 5 and 6-foot machines. If desired, an extension head, as shown in cut above. By using this head the soil can be cultivated clear to the trunk of the tree without the overhanging branches interfering in the least with the work of the horses.

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A SITUATION ON A PRIVATE DAIRY OR IN A CREAMERY by a competent man. Thorough education and training in the management of thoroughbred stock, veterinary science and butter making. An expert on the Babcock test. Best of references. Correspondence solicited. Address DAIRYMAN, care RURAL PRESS.

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Position as Manager on a Large Farm. Thorough acquaintance with Stock Raising, Dairy Business, General Farming. Experience in foreign countries: French, English, German correspondence; Bookkeeping; Graduate of Agricultural Academy in Germany. P. O. box 1835, Bakersfield, Kern County, Cal.

WAGON AND PLATFORM SCALES  
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## THE RAISIN INDUSTRY.

A Practical Treatise on Raisin Grapes, Their History, Culture and Curing.

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This is the Standard Work on the Raisin Industry in California. It has been approved by Prof. Higgard, Prof. Wickson, Mr. Chas. A. Wetmore and a multitude of Practical Raisin Growers.

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220 Market Street, San Francisco, Cal.

## What a Cannon Ball Can Do.

In dwelling upon the wonderful power of the guns of the Indiana, Albert Franklin Matthews, in an article on "The Evolution of a Battleship" in the *Century*, gives illustration from the recent Chilean civil war, showing the effectiveness of the smaller sizes of breechloading rifle guns.

A shot weighing 250 pounds from an eight-inch gun of Fort Valdivia, in Valparaiso harbor, struck the cruiser Blanco Encalada above the armor belt, passed through the thin steel plate on the side, went through the captain's cabin, took the pillow from under his head, dropped his head on the mattress with a thump but without injuring a hair, passed through the open door into the messroom, where it struck the floor and then glanced to the ceiling. Then it went through a wooden bulkhead an inch thick into a room twenty-five by forty-two feet, where forty men were sleeping in hammocks. It killed six of them outright and wounded six others, three of whom died, after which it passed through a steel bulkhead five inches thick and ended its course by striking a battery outside, in which it made a dent nearly two inches deep. It was filled with sand. Had it released deadly gases no one knows what damage it might have done.

A 450-pound missile from a ten-inch gun in the same fort struck the same vessel on its eight-inch armor. It hit square on a bolt. The shell did not pierce the armor but burst outside the vessel. It drove the bolt clear through, and in its flight the bolt struck an eight inch gun, completely disabling it. Such is the power of the smaller sized guns.

## RUN DOWN WITH

## DYSPEPSIA

## STOMACH

## Liver

## AND HEART

AFFECTED.

Almost in Despair

But Finally

## CURED

By Taking

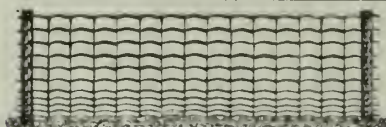
## AYER'S PILLS

"For fifteen years, I was a great sufferer from indigestion in its worst forms. I tested the skill of many doctors, but grew worse and worse, until I became so weak I could not walk fifty yards without having to sit down and rest. My stomach, liver, and heart became affected, and I thought I would surely die. I tried Ayer's Pills and they helped me right away. I continued their use and am now entirely well. I don't know of anything that will so quickly relieve and cure the terrible suffering of dyspepsia as Ayer's Pills."—JOHN C. PRITCHARD, Brodie, Warren Co., N. C.

## AYER'S PILLS

Received Highest Awards

AT THE WORLD'S FAIR



## IS IT AN INDIAN UPRISING?

Word comes from the Agencies that Chiefs Jack Fross and Sno Drift are already on the war path, and all Watch soon to follow, all bent on demolishing the settlers' fences. Nothing in the shape of a wire fence can withstand their assaults, except one which is called **The Page**. This is made of Coiled Steel wires and is so elastic that some claim it "hoodoo" its enemies. The settler who has this is perfectly safe.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

## WOVEN WIRE FENCE

Why pay 60 to 80c a rod for fence when you can make the best Woven Wire Fence on earth, horse high, bull strong, pig and chicken tight, for

13 to 20c, A ROD?

A man and boy can make from 40 to 60 Rods a day. Over 50 different styles. Catalogue free. Write to KITSUMAN BROS., Ridgeville, Indiana.

**THE COMET SPRAY & FORCE PUMP**

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**ALL BRASS FOR \$2.50.**

THOUSANDS IN USE. SELLS ON SIGHT, DOUBLE ACTING. THROWS WATER 60 FEET. BOOK OF SPRAYING RECEIPTS FREE. EVERY FARMER & FRUIT GROWER SHOULD OWN THIS. CATALOGUE, SPRAY CALENDAR, and full Treatise on Spraying, FREE.

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WOOL, GRAIN, FLOUR

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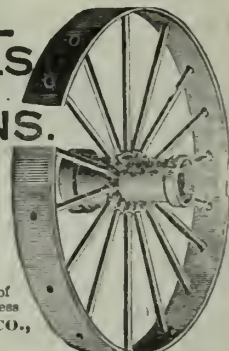
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## METAL WHEELS for your WAGONS.

Any size you want, 20 to 36 in high. Tires 1 to 8 in wide—buds to fit any axle. Have found many times in a season to have set of low wheels to fit your wagon for hauling grain, fodder, manure, hogs, &c. No resetting of tires. Cat's free. Address EMPIRE MFG. CO., Quincy, Ill.



## FOLDING SAWING MACHINE.

## 9 CORDS IN 10 HOURS.

RUNS EASY. NO BACKS. SAWS DOWN TREES. FOLDED.

BY ONE MAN. Send for free illustrated Catalogue, showing testimonials from thousands who have saved from 5 to 9 cords daily. It saws down trees, folds like a pocket knife, weighs only 41 lbs., easily carried on shoulder. One man can saw more timber with it than two men with a cross-cut saw. \$7,000 in use. We also make larger sized machine to carry 7-foot saw.

JAMES LINFORTH, 37 Market St., San Francisco.

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## Business College,

24 Post Street, San Francisco.

FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Typewriting, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils.

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## Where Cash is Scarce.

Scene.—A village blacksmith shop in Bergen county, N. J., up near the New York State line.

The village blacksmith and his helper have just finished their day's work. The latter stops to lock the shop, while the former proceeds homeward. He has disappeared around the corner, when he suddenly reappears, on the dead run. "Hi, there," he shouts. "Don't lock up yet! Wait a minute!" "Forgot something?" asks the helper.

"Yes."  
"What?"  
"The safe."  
"Oh!"

The brawny blacksmith enters the shop and soon returns with a long board on his shoulder. It is covered with chalk marks.

"What is that for?" I ask.

"My safe."  
"Your what?"  
"My safe."

I know him well, and I accompany him towards his home. On the way he explains.

He has shod and "sharpened," he and his helper, thirty-eight horses during the day. Been on the jump from early dawn until nightfall. Had work enough to keep him in the shop all night, but he needs rest. Now is the busy season. Cold weather always brings a rush. Horses must be shod and old shoes sharpened to guard against the slipperiness of the roads.

"You should grow wealthy," I venture. "How much do you charge per horse?"

"From \$2 to \$2.50 for the four shoes."

"According to that you have made in the neighborhood of a hundred dollars to-day."

"Yes," says he, "and it's all on that board. I chalk it there to save time and then transcribe it into my books when I get home."

"Nobody pay you?"

He looked startled.

"One man wanted to pay me," he said, "but it's Friday, and I was afraid to take the money. I didn't dare to break in on the monotony of the day's proceedings."

"Will they ever pay you?" I ask.

"Oh, I suppose so. Some are good, some bad. We take their word for it. Everybody does hereabouts."

I ascertained these assertions to be true by interviewing the tradesmen. One merchant showed me his books, which proved that he had \$10,000 outstanding.

"I get it in dribblets," said he. "In some cases I let the people work it out. In others I take butter, eggs, milk, etc., in part payment of the debt."

"Some of our people never think of paying for anything they get. When one tradesman shuts down on them they go to another, and thus run through the whole gamut. When they have exhausted their credit in this town they go to the next town, and so on. By the time they have run through all the adjoining towns the local merchants have been compelled to sell out, and the 'free traders' strike the newcomers and begin it all over again."

"There is very little money in circulation in any of these country towns," continued the speaker. "Some time ago I marked a ten-dollar note and got it changed at the store of one of my neighbors. The butcher, the baker, the saloonkeeper, and so on, brought that bill to me at frequent intervals for me to change. It remained in town for several months, and then I finally banked it. Blamed if it didn't come back even then. A citizen here paid it to me. He had received it in change in a New York clothing store. I have framed it now."

SUFFERERS FROM COUGHS, SORE THROAT, etc., should be constantly supplied with "Brown's Bronchial Troches."

The largest drydock in the world is now under construction at Port Orchard, Wash. A large tract of land on Puget Sound, sixteen miles from Seattle, has been bought for the purpose, and the work of building is well under way.

## A Wonderful Discovery.

One of the Remarkable Achievements of the Science of the Age.

(From the Herald, South Bend, Washington.)

It falls to our lot this week to tell our readers, and especially those who are not blessed with perfect health, of one of the greatest and simplest remedies of the century. Personally, we enjoy the very best of health year in and year out, but among our friends is J. L. Myers, proprietor of the Broadway Pharmacy, a man who knows his business thoroughly, is entirely wedded to chemistry and hygiene, and often "talks shop." One evening the conversation turned on new discoveries in drugs and remedies, and Dr. Williams' Pink Pills for Pale People were mentioned.

He told us that one of our mutual friends, John Wyandt, a Locomotive Engineer, owed his health to the medicine alone, and that Mrs. Lawler, the wife of Patrick Lawler, cooper at the Tannin Extract Works, and well known in this city, has been raised by them from what her friends thought was her death bed.

Having had our attention called to the matter so particularly, we have since found that everybody has a good word for Pink Pills, and especially were we interested in the case of Mrs. Lawler. Finally we called at her home and asked her to tell us if Pink Pills had really done as much for her as had been told. She said they had, and she would repeat the facts for me.

Mrs. Lawler said: "Two years and a half ago I was taken sick. I then lived in Tacoma, and for five weeks was not able to turn myself in bed. My husband and boys lifted me around and cared for me, and they scarcely hoped for my recovery. I could eat nothing, was simply worn out."

"I had read in a Canada paper of what Pink Pills had done and I was sure that if I could get them they would do me good, but I could not get them in Tacoma. I had sent to New York for them, but it took a long time for them to come, and finally I said one day that if the Pink Pills did not come by that evening I might as well give up."

"That night the pills came, and I began taking them. It said in the directions that they should be taken immediately after eating, so I ate some crackers soaked in wine, then took the pills, and in two days was able to sit up. In two weeks I was up and around, and was able to make the trip of 125 miles by cars to South Bend, where my husband had gone to work."

Since that time I have been well and have done my own work, and now when I feel worn out or ill I always take Pink Pills and they help me at once. I have, in the two years and a half, used twenty-one boxes of them, and we all use them when we are feeling out of sorts. I have recommended them to many of my friends, and they always helped them, and I can say to all mothers that they will find them a good medicine to build them up, cure headaches, dizziness and the ills which so often beset them."

Mr. Lawler also stated that he had often taken Pink Pills. That he used to be troubled with sick headache and dizziness in the morning, but that Pink Pills had cured him.

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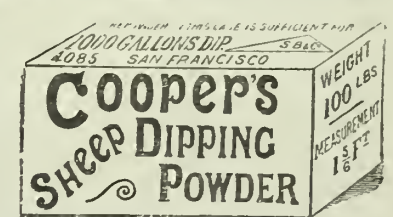
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| Creamery         | Owner.               | Separator Used.  | Price per 100 lbs. paid farmers for milk. |
|------------------|----------------------|------------------|-------------------------------------------|
| State Line       | Young & Clark        | De Laval         | 96                                        |
| Kiantone         | R. K. Houghton & Co. | Danish           | 90 7-10                                   |
| Chat Lake        | Chas. Low            | RUSSIAN          | 1 06                                      |
| Stillwater       | A. B. Carter         | RUSSIAN          | 1 11                                      |
| Nonpareil        | F. E. Thayer & Co.   | Danish           | 95                                        |
| Lander           | C. G. Babcock        | RUSSIAN          | 1 00                                      |
| Maple Shade      | R. K. Houghton & Co. | RUSSIAN          | 1 06                                      |
| Sherman Creamery | F. W. Edmonds        | De Laval (Alpha) | 97                                        |

It will be noticed that no creamery where a Russian was used paid below one dollar, and no creamery where another separator was used paid above one dollar. Send for circulars and please mention this paper.

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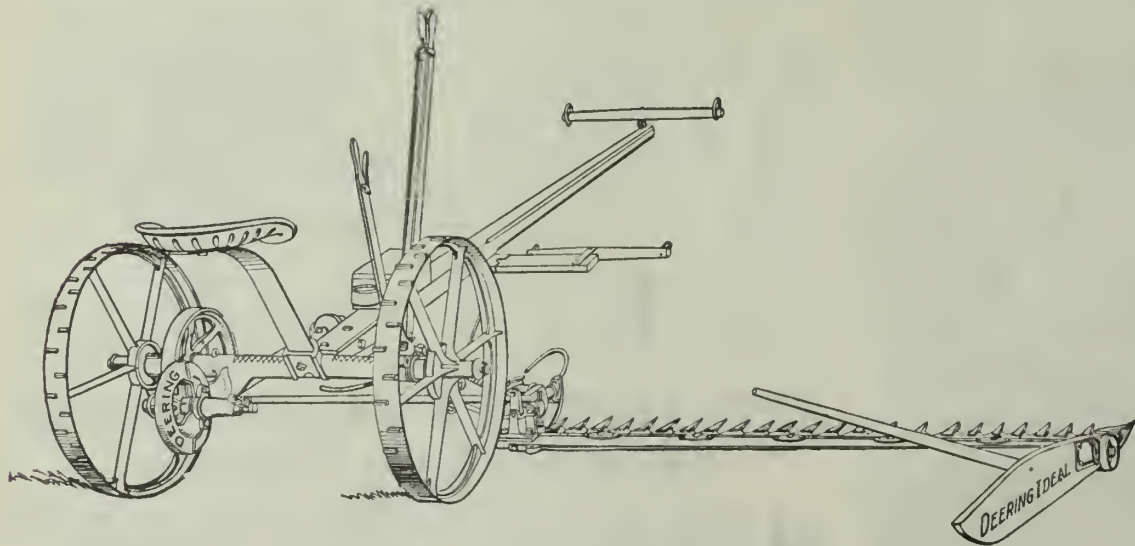
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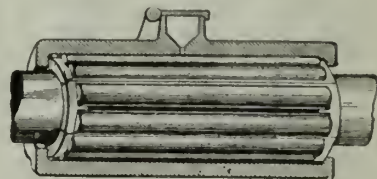
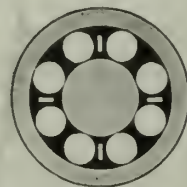
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AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 9.

SAN FRANCISCO, SATURDAY, MARCH 2, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

## Outdoor Scenes.

The advancing season calls to mind the delights of outing, the pleasures of the road, the stroll through by-paths, the camp beside the water or beneath the trees, and all the enchantment of an approach to nature which is so welcome as a relief from city scenes and activities. The engravings on this page display two widely different features of Pacific coast scenery. One is of Fall river—a romantic stream in the extreme north—which pours its waters into Pitt river and thus makes its contribution to our great Sacramento. An appreciative writer in the *Overland* speaks of its region in these words:

"Fifty miles southeast from the upper McCloud Falls, across measureless earthquake upheavals, traversed in midwinter on Hungarian snowshoes, the road steeply descends into Fall River valley. A serene panorama of vernal plain and slow-creeping rivers greets the eye restfully after the exciting exaggeration of mountain landscape beheld for a fortnight. To the right, beyond leagues of bright meadow, a cluster of lakelets bubble out of the loose lava crust which covers the northeastern corner of California. These small, brimming basins are the terminal flowers of branching stems of the Fall, Bear and Tule rivers. Fall river is the longest in view, dropping its unrippled coils down an emerald space of valley until, coming suddenly upon the dark, sluggish Pitt, it leaps to that sullen current in a delirious frenzy of shrilling, foaming cascades. The quickening is instantaneous. The Pitt is transformed into a roaring torrent, speeding straight for an austere line of ashen cliffs."

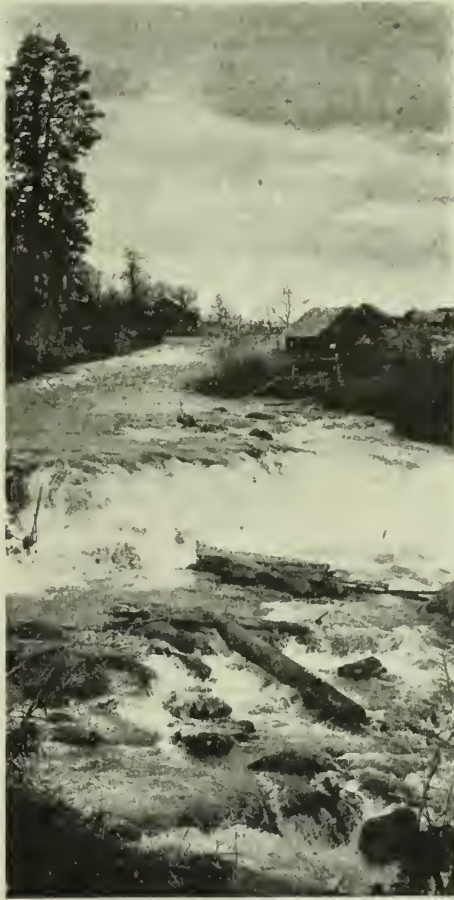
The writer we quote treats of Fall river in its wilder aspects. The photographer whose view we present caught it in its milder moods, where it turns mills and ministers to the service of cultivation.

The other engraving on this page presents a charming scene in the central California mountains.

The hard, smooth roadway amid rocks and trees and wooded slopes, with vistas of the river below, suggest to the denizen of coast or valley the pleasures of summering in these higher altitudes. The river in this case is the Tuolumne and the scene near Jacksonville, but the view is merely typical of hundreds in the foothills of the Sierra Nevada on the California side and all who have enjoyed them will find their impressions reflected in these lines of one who evidently appreciates such scenes:

"The landscape spread before us always was, from an artistic point of view, beautiful. Continually we get glimpses of the distant Sierra covered well with snow, and the effect upon the more quiet aspect of the near landscape was to lend a feeling of expanse and dignity to it all, which is scarcely to be conveyed by words. There is a sense of vastness about all

California landscape which takes quiet possession of an appreciative beholder, in a way that is somewhat remarkable. The long, dry summers fill our air with a tremulous, lilac-toned haze that gives an air of mystery and distance which I have never seen in any



SCENE ON FALL RIVER.



A GLIMPSE OF THE TUOLUMNE FROM NEAR JACKSONVILLE.

other land. This is aided by the openness of the skies day by day, their rich, warm blue and violet tones only accented by an occasional streak or tuft of wandering cloud that appears to be at an immense distance aloft. The eye wanders over a vast wealth of detail in hill, mountain and woodland, diversified by a great variety of tree growth and flora."

## California Wine at the East.

The Eastward movement and sale of California wines and brandy at the East must, under the circumstances, be looked upon as quite encouraging. The report from New York is that attendance at the sale on Feb. 25th was larger than at any of their previous sales, and the prices obtained were, on the average, about the same as those which have ruled at the two previous sales. Nearly 17,000 barrels of California wine reached New York City from February 5th to 25th, and under the circumstances the prices obtained were considered satisfactory, especially as it all came under the low freight ruling before the 4th instant.

On February 26th there were six carloads of wine and one of brandy sold at auction in New York at the following prices: One hundred and forty-five barrels port wine, 34½ to 27 cents per gallon; 117 barrels Zinfandel, 23 to 19½ cents per gallon; 38 barrels angelica, 30 to 27½ cents per gallon; 5 barrels sauvignon, 26½ to 26 cents per gallon; 4 barrels muscat, 36 to 33½ cents per gallon; 5 barrels sauterne, 24½ to 24 cents per gallon; 30 barrels brandy, 53 to 47 cents per gallon; 40 half-barrels brandy, 58 to 57 cents per gallon. The brandy was sold at the short price—i. e., the buyer paying the tax of \$1.10 per gallon. The prices are low, it is true, but the tendency toward freer movement in the Eastern markets may bring its own reward later on.

## Dairy Law.

The dairymen have succeeded in getting their law through both Houses and it now will hang on the Governor's pleasure. As he has declared himself favorable to important interests which have not been fostered by State funds, he may favor this measure. The purpose of the law is to aid the dairy industry by prohibiting frauds in butter and cheese and estab-

lishing a State dairy bureau. The new enactments against fraud are understood to press most heavily upon the manufacture known as "filled cheese," which is a product of creameries in which the fat removed for butter-making is replaced by oleomargarine, or some sort of shortening which goes under that name. Of course, those who are making full-cream or full-milk cheese do not desire to compete with cheese artificially enriched in that way. We understood that laws passed a decade

ago covered that point, but a new law may serve to remind people that the dairymen had secured protection before, or to provide any deficiency in the earlier enactment.

THE Bodega creamery will be completed within thirty days.



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ALFRED HOLMAN.....Editor.  
E. J. WICKSON.....Special Contributor.

San Francisco, March 2, 1895.

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## The Week.

### Weather and Crops.

The peerless weather has continued and the closing month will go on record as one of the most delightful of Februaries. Growth has been especially active during the last two weeks and rank grain and lush pastures have overspread the whole arable area of the State. Even in orchards clovers and weeds have grown rather too rapidly for the plowman to easily handle them, and there is consequently a rush of work to finish pruning and get the plows into the orchards. Blossoms are everywhere and the landscape is a picture of bloom and verdure. If such conditions hold a while the whole throng of wild flowers will join to the few venturesome ones which have already broken bud.

What will March be? It is usually a good month. For the last twenty-four years the average rainfall in this city has been 3.22 inches; the greatest March rainfall was 8.70 inches and the least was .60 of an inch. We could get along very well indeed with light March rains this year, providing April gives enough to carry the growth. The probability is that we shall get all that is needed during the balance of the season.

### Eggs Going East.

It is interesting to note that we are getting the turn on the egg business and are sending to Chicago a few in exchange for the many which are shipped into this State. In our last issue Mr. Whitman told, in an interesting way, how it is that these "western eggs" are rolled together to flood our far-western markets. Our shipment far eastward this winter is a commercial novelty. The Chicago dealer who was selling California eggs last week says that this is the first time California eggs were ever sold east of the Missouri river. "Never before," says this Chicago egg expert, "would such a shipment have been profitable. The price in San Francisco frequently ranges from fifty to sixty cents a dozen. Thirteen months ago we shipped four or five carloads of eggs from Chicago to San Francisco and sold them there for 16½ cents a dozen, but last winter was warm and eggs were cheap in Chicago. The wholesale price here now is 28 cents a dozen. The carload we bought in San Francisco cost us 16 cents a dozen, and we have ordered another carload. The freight cost 3½ cents a dozen, leaving us a nice profit. The carload contained 12,000 dozen. They are what are called California ranch eggs. The cold rains on the coast are now over and the warm weather has caused the hens to lay rapidly and eggs are cheaper there now than they have been for many years. The hens in the west seem to be on a strike, but the New York hens have greater cause for striking because of the importation of pauper eggs from Canada. Nearly all the eggs in New York come from Canada. They

are not fresh, but are limed. Some of them are a year or two old. There are no fresh eggs now in Canada. This winter has been very severe on hens.

### Fruit Shippers' Manifesto.

We publish in full upon a following page one of the most important documents ever put forth by the fruit interest of California, viz: The appeal of the committee appointed by the November Convention of Fruit Growers, for better treatment from the railway company. The document is conceived in excellent spirit; it is frank, manly and fair. It describes the present disastrous condition of fruit shipping without whimpering; it frankly concedes favors granted, but it boldly cites pledges not fulfilled; it strongly appeals for the application of true and time-honored business policy to the encouragement of a staple trade which carries in its wake vast and increasing incidental advantages to the transportation company; it strikingly points to extortion and discrimination in minor charges which have no excuse, nor have they even possibility of existence except within the realm of a monopoly. One would think that such declarations, thus fortified and thus honorably presented, would command some speedy, cordial and satisfactory response from the powers addressed. Such would be the method among business men who had minds to perceive points of mutual advantage and courage to act in the removal of conditions which menace the very existence of a traffic which has always been a matter of doubt and danger to the shipper and of vast and certain profit to the transportation interest. Not only has the railway coldly viewed the grower's losses, even to the last nail and inch of box lumber, but it has gone into his purse for deficiency caused by the ruin of his property through its own breach of faith as to time of transit. And not only this, but it has allowed cormorant capitalists, in the form of refrigerator-car owners, to plunder its own patrons upon its own rails, consenting to save the cost of rolling stock and to share the exorbitant refrigerator charge against the grower by collecting mileage from the car owner. The grower knows well enough that the railway company should, from all moral consideration, furnish him suitable cars at their bare cost of investment and maintenance, and not take a share of the exactions of car owners who should not be allowed to intervene.

But passing these points which, under existing conditions, probably cannot be remedied, what answer will the company make to the very temperate and restrained appeal which has been made to it by the growers? What has it to say about the decade of promised reduction, according to the increase of the traffic—a decade of promises unfulfilled? Growers were quiet so long as the business yielded them a living, although they knew very well that they had earned better returns by their increase of business. They did not forget the promises of the magnates who received their delegations with such ostentatious cordiality ten years ago and put aside present demands by offers of better rates just as soon as the increased business was attained. They do not forget that they were urged to form associations, to exploit Eastern markets, to work in every way to create a distant demand so that they could ship enough to get lower rates. These promises served perhaps the purpose for which they were intended. They silenced complaint; they incited to extended investment in fruit production; they stimulated increase in output to the amount shown by the committee in their document, but now they appear to the grower to have been but an *ignus fatuus* to lead the fruit interest into a slough of loss and disheartening instead of a true light to sound business ground upon which the railways could render such cheaper service as would permit the grower a small reward for his labor and investment. It is belittling that the company should not only show some respectful attention to the appeal of the growers which is now in their hands, but should proceed at once to give some assurance that they appreciate the growers' situation and propose to alleviate it. If they are not bled by iniquitous rebates, as they ought not to be, it is clear that this vast traffic yields them a vast net income. This they should divide with the grower if he can be expected to proceed with his enterprises for the building up of the State and the further aggrandizement of transportation interests. There should be some speedy and satisfactory answer to the declaration which we publish upon another page of this issue.

### Horse-Fed Pork.

There is probably no real objection to horse-fed pork. Horseflesh has a recognized standing as human food in Europe and good fresh horseflesh is certainly more wholesome and stands as high sentimentally as much material that forms accepted hog feed. But we question whether California bacon and ham eaters will relish famous Eastern hams as keenly as before the reports of horse-fed pork from the Northwest. If they do not, the remedy will be to promote the production of California pork on the basis of alfalfa and barley, and this should be done anyway. The reports of feeding horses to hogs in Montana are, however, of much industrial moment. The story is, Montana ranchers have become horse poor. They were situated just this way when the feeding season

opened this year, with no corn to feed and a lot of hogs on hand. It was very easy to experiment in feeding horseflesh to the swine, and a few days were sufficient to prove the profit of it. At first there was some little hesitancy among the feeders themselves as to entering into the business on a large scale. Some looked upon the idea of killing good blooded horses and feeding them to hogs as nothing short of brutal. But their prejudices were finally overcome by the argument that nearly always wins when the pocketbook is touched. When bought in lots of, say 1000, the horses could be purchased for \$3 a head. The horses are shot and then skinned. The hides bring one dollar apiece, and that amounts to considerable revenue. The carcasses are then quartered and boiled in caldrons. The hogs will eat all of the meat that is given to them, they fatten rapidly on the feed and it is the kind of flesh that weighs heavy.

### Tobacco at Gilroy.

Probably all the State has wondered why tobacco production, which has been going on near Gilroy for the last twenty years and more, has never attained greater success. We know not how accurately the extract we shall make from the Gilroy *Gazette* of last week meets the facts, but it is made with the air of knowledge. It is this:

Every now and then we catch in an exchange a reference to the capacity of this section for the production of good tobacco. The conditions for its favorable growth and cure do exist and should be taken advantage of by individuals in an experimental way, but never, for many years to come, can the residents not personally interested in its production be induced to put up money to start factories. The two unfortunate experiences already had have burned too many fingers for the old victims to ever place their hands in the vicinity of the fire again. Had the two previous enterprises been fairly and honestly conducted, with due regard to the prosperity of the community instead of with an eye singly to enriching it for the benefit of the individual, Gilroy would to-day be the center and *entrepot* of a great tobacco section. The conditions of our soil are favorable to the growth of a good quality; the climate is such that the curing of it is a comparatively easy matter, and, as we have already said, it can be made a very profitable and great industry if in competent hands and a factory is run on a business-like and honest basis, but this community is no longer a fresh milk cow for dishonest promoters.

It will be generally comforting to know that the curing of the tobacco satisfactorily can be easily compassed. It has always had a reputation of difficulty, and it certainly cannot be done on Eastern lines. If honest work is all that is needed to make a tobacco enterprise a success, that ought not to be hard to command.

### Sugar and Live Stock.

Unfortunately the last tariff law burns at least two important producing interests of our country. It has lowered the price of sugar beets and sugar cane by removing the bounty and it is knocking our stock industries by retaliation from sugar countries which do not like their product taxed on importation to this country. It is telegraphed from Chicago that Nelson Morris, the well-known packer, said: "We shipped \$18,000,000 worth of cattle and produce to France alone last year, and this great trade is absolutely destroyed by the order of the French Government. The effect of the German and Belgium embargo has been to reduce the price of cattle of the classes shipped to these countries by \$10 a head, and this French edict will even more unjustly affect the stockyards. This has been the effect on prices, notwithstanding the fact that the supply of cattle has been cut down two-thirds on account of the lack of feed. The effect on the product is even greater than the effect on the live-cattle trade, especially as far as France is concerned. We were shipping 7000 cattle a week, and as many or more in addition in the form of the product. France has been taking a great deal of lean cattle for soups, and this class will be very injuriously effected by the new edict, while as to dressed beef and pork products the result will be even more far-reaching. Three months ago there was a proposition from the French Minister of Agriculture offering to continue to receive our cattle if the United States would take off the differential duty on sugar, but the Government paid no attention whatever. The French Government will not renew the contracts for canned meats, will never allow Americans to bid, but will endeavor to supply their needs from their own colonies. It is now using some brought from Madagascar at a price double that which Americans receive."

### The Sugar Bounty.

Unless Mr. Cleveland intervenes and vetoes the proposition, California beet-sugar makers ought to get a little more for their last season's work than they anticipated. An amendment to the appropriation bill, which was adopted in Washington on Tuesday of this week, provides \$238,289 for the sugar bounties earned prior to August 28, 1894, at two cents per pound for sugar up to ninety degrees by the polariscope, and at one and three-fourths cents per pound for sugars over eighty and under ninety degrees. It further provides \$5,000,000 for bounties at the rate of eight-tenths cent per pound on sugar produced from August, 1894, to June 30, 1895. Unfortunately, this does not help the beet growers unless they sold under contract conditions providing additional price if the bounty were paid.



## From an Independent Standpoint.

The country has small reason to be grateful to the Congress whose days of authority end with this week. It came in under the best auspices—with all but unanimous endorsement by the people, with the powers of the Executive office in political concurrence with it, with the national income adequate for all legitimate purposes, with business prosperous in all departments. In its two years of life it has done little but confuse and disturb the business of the country; and it leaves all the larger subjects of legislation in the worst possible shape. It would be unfair to charge against this Congress all the hardship of the past two years; it was indeed its misfortune to fall upon a season of universal adversity; but this much must be said, that it has been a constant source of irritation and mischief and that whatever subject it touched it has left in worse condition than it found it. If at the close of the special session in the summer of 1893 the fifty-third Congress had adjourned *sine die*—if there had been no Congressional session from that time until now—the country would have been vastly better off. Its record includes a botch of the tariff, the enforcement of an offensive method of personal taxation, a scandal (in connection with the sugar interest) which has put the country to shame, the utter neglect of such a great national interest as the Nicaraguan Canal and a pitiful confession of incompetency to deal with the national finances. In all this there has been involved much of positive injury to the material interests of the country, much of discredit to the American system and much of humiliation to the Democratic party.

The fault with this Congress has not been that it lacked honest membership or able leadership, for it has had both. It lies rather with the false notion which appears to have gotten complete possession of this country, that economic questions can be settled by the methods of partisan politics. We undertake to adjust our tariff laws and our finances—matters of the most profound and complicated sort—by the inspiration of brass band music, fire-works and passionate oratory; and with more concern for the next election than for the business principles involved. It is not surprising that such methods make confusion and end in mischief and contempt. It is only surprising that the country stands up under it.

The Congress now coming in and to meet in December will act under the same false and mischievous principle; it will strive first for partisan advantage and only incidentally for the good of the country. It will, however, have some great advantages. First, it will represent certain economic principles to which the country is habited, and will, therefore, inspire confidence from the beginning. Second, it may learn from the political disasters of its predecessor what courses to avoid. Third, it represents a party which has hitherto dealt successfully with the national finances and which includes financial leaders of both ability and established authority. Fourth, it will very largely be made up of men trained in public affairs, who will go about their work with the confidence of experience. Fifth, it finds the Government in such a state that almost any change will be for the better.

But although the incoming Congress may inspire public confidence, and may in fact do much to restore normal financial and business conditions, it cannot be what it ought to be, for the system under which it must work will not permit of it. It will be not an assemblage of earnest men united in the purposes of public service, but a body of politicians whose foremost aim will be to promote the interests of the Republican party. Statesmen of experience tell us that there is no other way, and perhaps there is not; but it looks as if there ought to be. We cannot believe that we shall go on forever under a system which makes it impossible for the country to enjoy the advantages of fixed policies in purely economic affairs. We have faith that the business genius of our people will find a way to stop the confusion and the waste of constantly changing systems of tariff, taxation and finance.

The San Joaquin Valley railroad project makes headway steadily. Subscriptions are still coming in and the fund is well up toward the three million

mark, with many local capitalists and all the interior yet to hear from. Incorporation has been legally affected during the past week with Mr. Spreckels as president; and within a few days surveyors will be in the field. The first effect of this great project has been to stimulate activity in city real property, and there is an unmistakable disposition on the part of certain professional "promoters" to make a speculative real estate boom. Against this effort the *Examiner* utters a very timely and wise note of protest. It points out that San Francisco has vast stretches of unoccupied land easily available by electric or cable cars; that there is room for scores of thousands of dwellings down the peninsula and across the bay; and with very great point it is added that "before there can be a healthy increase in land values here to any marked extent there will have to be a very decided increase in population, first in the State and then in the city and suburbs."

This is good advice, and the spirit of it is just as applicable to the country as to the city. Nothing could be more unfortunate for California at this time than a boom which would advance the price of land beyond its real value. We hope for great things from the new railroad—for a large increase in population, for greater profit in production—in short, for the filling up and development of the country. The indispensable basis for such a movement is land at reasonable prices. If the story goes out that our lands are "boomed," immigration will not come here. One of the reasons why California has lagged behind her northern neighbors in the matter of immigration has been the prohibitive prices at which our lands have been held; and if we are to profit by the promised new conditions, we must not inaugurate an era of speculation. Our lands will grow fast enough when we have more people and more industry and better transportation.

It is reported that English investors have offered \$1.16 for the whole issue of bonds recently sold by Cleveland and Carlisle at private sale for \$1.04½—a profit of about eight millions. And it is reported further that this offer will not be accepted because the relative value of these bonds (as compared with other U. S. bonds as they are now selling in the markets) is \$1.20, and it is hoped to get this higher figure. The whole transaction is to be so managed that the syndicate will clean up from eight to ten millions upon the basis of a relatively small original investment. Here is the way it is done: The Government needs say five millions of gold, and the Secretary of the Treasury, under the terms of the private sale, calls on the syndicate for it. The money is promptly forthcoming and the bonds are turned over at the agreed price of \$1.04½. Whereupon the syndicate puts them on the market and sells them out at \$1.16@1.20, pocketing the profit and holding the original five millions to pay for the next batch. In this way—the bonds being issued in installments—the original purchase fund actually buys the whole issue of sixty-two millions, and with this comparatively small fund the syndicate makes a great clean-up. There is no reason why the Government could not have sold its bonds in the market and saved to itself the eight to ten millions which will go into the pockets of the speculators. Since the beginning of the Government there has not been a transaction so foolish and stupid; and it is easy to sympathize with the indignation of those who declare that Mr. Cleveland and his Secretary have allowed the Government to be buncoed.

The recent trouble in the Hawaiian Islands has been followed by conviction of a dozen or more conspirators who are under sentence of death, though it is believed that their punishment will be commuted to banishment. The ex-Queen was on trial at last report and she will probably be sent out of the country with the others. In all other respects things are running along in their usual groove. The leading men in the Islands make no secret of their plan to carry on the Government in its present form until such time as the United States shall take them in; and they expect that time will be when Mr. Cleveland retires from the Presidency, two years from now. The failure of the House to act upon the bill recently passed by the Senate in aid of a California-Hawaiian cable is likely to cause some disgust at Honolulu, but it is not believed that it will alter the

plans of the annexationists. In this country, sentiment favorable to taking in the Islands steadily grows, and no matter which party wins in the next national election, the thing is bound to be done.

## Seasonable Observations.

TO THE EDITOR:—What portion of the globe can boast of such winter weather as we have had the past month! If you know of any, won't you please mention it? The rain blasts of December and January, while severe, produced no suffering to man and beast, and since the last tempest of January 22d the weather has been clear, warm and springlike, giving the farmers a fine opportunity to finish their seeding, their trimming of trees and vines preparatory to the cultivation of orchards. The two showers intervening did no further harm than to delay operations for a day or two. The temperature through December and January went close down to the frost line, thus checking a too-forwardness of huds and foliage, and the early-sown wheat, which is regarded as more beneficial than otherwise. But the last two weeks have developed a rising temperature, sending Jack Frost up the mountain sides.

As a consequence there is a general awakening of slumbering nature. The newly sown grain is rapidly showing above ground, the result of the warm sun and the lengthening days, and the early sown is completely covering the ground, and in many fields the jack rabbit can hide with safety.

*The Wheat Discussion.*—I have just been reading the first installment of the opinions of wheat-growers in your last edition. I guess had those writers to the secretary of the State Agricultural Society anticipated the use to be made of their sereeds, they would have studied their figures somewhat more closely and the wide range of cost must have been somewhat reduced. I shall watch with great interest the figures to the end, with the hope of extracting a good deal of comfort therefrom. It is no longer a difficult matter to calculate the cost of a bushel of wheat, especially on a given yield. From the figures submitted it will be observed that the farmer who can raise from twenty-five to forty bushels to the acre has still a margin of profit left. I have in mind a twenty-acre field of wheat in my own vicinity on which much labor had been bestowed, which yielded last harvest forty-five bushels to the acre. On this, at the ruling price, nearly half was margin, showing that whether we farm much or little land we should farm better.

*A Word as to Swine.*—Practically, the hog crop of 1894 is out of first hands, and a glance at the situation may be in order if there be no ready cash in it from past experience. As I promised you some time ago a leaf from my diary, I will dispose of that first.

Seeing a superior wheat crop sinking lower and lower in price until every grain of margin disappeared, and to sell invited a serious attack on the capital invested, I conceived the idea of converting as much as I could into a better selling form of produce. Having about seventy-five head of my own growing, I appraised their value as I did of the same number I purchased. I began feeding wheat nice, clean, plump wheat. Being of various sizes and mixed breeds, some of the hogs fattened quicker than others, so that we began to sell early and at good prices—say 4½¢ per pound live weight. Soon, and contrary to all expectations, the market went down, down, down. We followed it until 3½¢ was reached, then we killed and packed on our own account, and that product was converted into as fine ham, shoulders, bacon and lard as ever was produced, and the whole of it has already been disposed of to families and dealers at a price at least equivalent to hogs at five cents live weight, and the demand is urgent for more.

*Lessons from Experience.*—There are several lessons to be drawn from this:

First. The California market wants smaller hogs. Second. The California farmer wants better breeds, such as will fatten on the least possible feed.

Third. To be independent of the whims of the California packer, the farmer must pack his own crop when the price is sent below a remunerative figure.

Cheap wheat and barley will so cheapen the swine product as to shut out Eastern importation, but there is no immediate danger of it; and meantime other consumers of our surplus may appear. It may be said all cannot become packers of pork, which is true; and the grower who has only a surplus of a few is the man that breaks the market. He will take his crop into one wagon and proceeding to a market of limited means and capacity he sells it for what he can get, and that fixes the price for all. Such corners could be avoided by home packing, and if that was impractical, then by co-operative packing and curing at some central point.

The time required between killing and final curing is so short as to discommode no one to wait for a return and, if necessary, could readily be bridged by accommodations from others.

*Advantage of Well-Bred Swine.*—A close calculation for the grain fed (two-thirds wheat and one-third barley) yielded us a trifle over a cent per pound. What the good strains consumed was hardly perceptible. They were fat from the beginning and were always fat and gentle. The others were always hungry, could run faster than a yearling calf, were never content and would leave bushels of feed to finish upon poultry. That's the kind we bought and their offspring disdain to associate with the gentle, chubby sorts of the farm. There is no comparison as to the profits, but just what it is we can only guess.

GEORGE ORLEYER.

Yuba City, Feb. 25, 1895.

## The Florida Disaster.

Speaking of the last hard freeze the Jacksonville *Union* says that orange trees were more hurt than in December, on account of the sap having, in the southern parts of the State, started to run freely. Thousands of acres of vegetables, such as egg plants, watermelons, tomatoes, peas, etc., will have to be replanted. There was a larger crop of vegetables just coming out of the ground than at any time in the history of the State, as almost every orange-grower had resorted to this means to recoup. On the east coast, along the entire Indian river, the pineapple growers are severely hurt, some saying that two-thirds of the plants themselves are killed. On the west coast, and in the lake regions, tomatoes, which were almost the exclusive crop, were killed outright. Even strawberries were set back, and in places killed.



## Rainfall and Temperature.

The following data for the week ending 5 A. M., February 27, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week. | Total Seasonal Rainfall to Date. | Total Seasonal Rainfall Last Year to Same Date. | Average Seasonal Rainfall to Date. | Maximum Temperature for the Week. | Minimum Temperature for the Week. |
|----------------------|------------------------------|----------------------------------|-------------------------------------------------|------------------------------------|-----------------------------------|-----------------------------------|
| Eureka.....          | .78                          | 32.47                            | 41.78                                           | 28.76                              | 64                                | 42                                |
| Red Bluff.....       | .76                          | 24.20                            | 16.57                                           | 18.97                              | 76                                | 44                                |
| Sacramento.....      | .34                          | 21.54                            | 13.11                                           | 14.64                              | 68                                | 46                                |
| San Francisco.....   | .28                          | 21.97                            | 15.50                                           | 18.10                              | 66                                | 46                                |
| Fresno.....          | .14                          | 10.79                            | 5.88                                            | 8.06                               | 70                                | 44                                |
| Los Angeles.....     | .01                          | 11.44                            | 6.03                                            | 14.69                              | 74                                | 44                                |
| San Diego.....       | .01                          | 9.86                             | 2.93                                            | 7.87                               | 70                                | 41                                |
| Yuma.....            | .02                          | 2.97                             | 1.42                                            | 2.69                               | 84                                | 48                                |

## Gleanings.

ANOTHER creamery is being built at Arcata.

As the consequence of recent movements here, the prices of California wines are advancing in the New York market.

THE Sonoma County Horticultural Society protests, by formal resolution, against the abolition of the State Horticultural Commission.

LAST WEEK Mr. John J. Valentine sent a box of the best Highland (San Bernardino county) oranges to W. E. Gladstone and another to President Cleveland.

SAN JOSE *Mercury*: President Worthing of San Jose Grange says that if every man, woman and child in California would eat only ten pounds of dried fruit annually the entire product could be marketed in this State. This emphasizes the necessity of spreading the gospel of dried fruit.

VACAVILLE *Reporter*: A farmer in Suisun valley has solved the tramp question. He has had a sign made in letters large enough so that he who runs may read, which contains the following terse statement: "Saw Wood or No Grub." The fraternity do not tarry in the neighborhood, but seek a more congenial locality.

SOME time back W. O'B. Macdonough, the owner of Ormonde, arranged with the Stanford estate to breed that great horse to a select few of the Stanford mares, the agreement being that all horse colts should be the property of Macdonough and all fillies be the property of the estate. The first foal under this bargain came into the world on Monday of this week and is a filly. The dam is imported Fairy Rose, the dam of Racine. The value of this filly is supposed to be \$25,000.

POMONA *Progress*: Orders for oranges are coming in faster than the Exchanges can handle them. There are as many persons at work at the Pomona packing-house as can be accommodated there. The Exchanges are receiving some large orders from the East. A New York firm has ordered fifty carloads of oranges, and several have placed orders for as many as twenty-five carloads, directing that five or more carloads be shipped at once. With favorable weather the bulk of the crop would soon be moved.

IT having been reported in the East that the California orange crop had been badly damaged by frost, James A. Barwick, director of the California weather service, furnishes the following lowest recorded temperature for this season at the following places, situated in the orange belts of both Northern and Southern California: The lowest temperatures in the Northern California citrus belt were: Oroville 30 degrees, Palermo 26, Newcastle 26, Orangevale 25, and Sacramento 30. The lowest temperature in the Southern California citrus belt were: Arlington Heights 32 degrees, Riverside, San Bernardino and San Jacinto 27, Ontario 31, Pasadena 34, Pomona 34, Los Angeles and Santa Barbara 37.

ARROYO GRANDE *Herald*: The dairymen of this county are catching on to the modern way of making butter. They wanted the highest prices for their products, but the constant quotations of creamery butter of six and seven cents a pound above the best dairy butter opened their eyes, when they knew the creamery process would turn out enough more butter to pay for the manufacture. They cast their eyes about them immediately, and the result is that four creameries and one separating station are building and almost ready for business. Two of the creameries are located in the northern part of the county, in the vicinity of Cambria, one near this place and one at Nipomo, and the skimming station is at Oso Flaco. These creameries will represent an incorporated capital of perhaps \$60,000, or a paid-up capital of about \$30,000. Such a good beginning will certainly not end here, and we expect to see two or three more creameries constructed before the season is over.

C. A. A. SILBERSTEIN tells the Woodland *Democrat* that he has planted 5000 fruit trees and over 20,000 new vines at the Orleans Vineyard. The planting of so many vines indicates fresh hopes for the rehabilitation of the wine industry, which has been in an inactive state for several years.

THE Riverside *Press* says that the syndicate which is negotiating for the Rialto lands intends to put out 8000 acres to canaigre and establish a plant to handle the crop.

R. W. SKINNER, the Yuba City canner, is planting eighty acres of peas near town for canning purposes.

## FRUIT MARKETING.

## An Appeal to the Railroad.

Full Text of the Address of the Fruit-Growers' Committee.

SAN FRANCISCO, February 20th, 1895.

To the Officers of the Southern Pacific Railroad—GENTLEMEN:—We, the undersigned Committee on Transportation appointed by the fruit-growers in State convention, held in Sacramento on or about November 20th, 1894, beg leave to submit the following statements and facts for your earnest consideration:

Knowing, as we do, how thoroughly well informed you are as to the status of the fruit industry of the State, we deem it needless to call attention to the deplorable condition in which the fruit-growers of the State are now placed. We feel assured you keenly realize that a crisis has been reached—a crisis which threatens not alone the future welfare of the fruit-growers, but also the welfare of the State, as well as the welfare of your company.

It is not difficult to foresee the end should the experience of the fruit-growers in the next two or three years be a repetition of 1893 and 1894. It must mean, first—the financial ruin of the vast army of fruit-growers, who are among the most desirable citizens of the State; it must further mean a most serious shrinkage, not alone in values throughout the State, but also in population. All of which cannot but mean a most serious shrinkage in the values of California railroad property. It must, therefore, be plain that at this time the interests of the California transportation companies and the fruit-growers are identical. The prosperity of the railways in this State must largely be dependent upon the prosperity of fruit culture, which has now become almost the prime industry of the State. We believe, that as intelligent, thoughtful and wide-awake railroad men, you fully and deeply appreciate all these facts; and we therefore do not deem it necessary to waste further words in dwelling upon these points, other than to emphasize the matter by submitting for your examination the returns and statements of sales from the following growers and shippers, which are herewith presented and which we believe to be fairly representative: Couper & Sons, Placerville; F. V. Veeder, Grafton; A. T. J. Reynolds, Walnut Grove; Jno. Miller, Walnut Grove; Auburn Co-operative Fruit Co.; Sperry Dye, Walnut Grove; G. W. Reed, Washington, Yolo Co. \* [See note, bottom of column.]

The question at issue is: How shall the present deplorable conditions be remedied? We hope we are not of those who unwisely and unintelligently lay the entire responsibility of the serious losses involved at the doors of the railroad company. We believe that the railroad company is sufficiently alive to its own interests not "to kill the goose that lays the golden egg," and that it stands ready to lend its helping hand and to aid—all that lies in its power—to relieve the distress of the fruit-grower. We realize that your company has from time to time, as the volume of business increased, up to the year 1886, made reductions in rates until they reached the present tariff; nor are we unmindful of the great service rendered the fruit industry of the State by your company through the able and energetic efforts of your Mr. Stubbs, who in 1887 secured a reduction in fruit rates from Chicago to New York of from \$200 to \$100 per car; thus most materially aiding in the opening up of the great Atlantic market, which has since developed from one single carload shipment in 1876 to 2000 carloads in 1894.

Analyzing the causes that have led to the disastrous results of 1894, we find that they are manifold and that they may be enumerated as follows:

First, hard times; second, the glutting of markets; third, the railway strike; fourth, unsatisfactory railway service; and fifth, excessive railway and refrigerator charges.

In order to place the fruit industry once more upon its feet, and to bring back to it that degree of prosperity which it deserves, it is essential that, so far as possible, all unfavorable causes that lie within human power to overcome, shall be removed. Realizing this, the fruit-growers and shippers are perfecting arrangements which will enable them to overcome one of the serious evils of the past—that of "glutting the markets." An association has been formed for the express purpose of striving to regulate distribution; so that each market shall receive, so far as possible, all the fruit it can profitably use and no more. The fruit shippers and growers, realizing the importance of an enlarged market, have set forth renewed energy with a view of introducing their products into new and untried fields, thereby widening and broadening the demand.

While these efforts are essential to obtain improved results, these things alone can at best prove but partial remedies. The enlargement of the market, for example, is most important in its way, and yet that alone will not afford relief. The fruit was more widely distributed in 1894 than ever before and more new markets were opened during that season

\*Accompanying this address there was a series of statements from the parties here named, showing that the fruit business with each, during the season of 1894, was a losing one.

than ever before, and yet these things alone did not prevent failure. Other things are necessary, and these lie within the power of the transportation companies to do. It is of the highest importance that better service and lower rates than ever before be offered the fruit-grower. This statement is made in the face of the fact that we fully know that, as compared with similar rates paid by the Florida and other growers in the Southern States, the rates charged for transportation of California fruits seem low and reasonable.

We believe ourselves justified in asking for concessions from the transportation companies on the following grounds:

First—As far back as 1887, when a reduction in transportation rates was asked for, the fruit-growers were informed that the rate then prevailing was the lowest possible rate that could be established for the volume of business then handled; and that no reduction in rate could be hoped for until the volume of business had largely increased; in other words, that the way for the grower to obtain lower rates was to increase his tonnage. Since then, the green fruit shipments have increased from 35,573,000 pounds to 161,300,000 pounds—an increase of nearly five fold—and yet there has been no reduction in rates. This, in the face of the acknowledgment on the part of your officials that it is a principle in railroading to reduce rates, until a certain minimum is reached, in proportion as there is an increase in the volume of shipments.

We are not unmindful of the fact that your representatives, Mr. Curtis and Mr. Smurr, who appeared before the November convention in Sacramento, announced that it was the intention of your company to establish a five-day ventilated car service from Sacramento to Chicago, beginning with the season of 1895, in lieu of a reduction in rates. We appreciate the apparent importance of this proposal, but a careful consideration of the facts leads us to the conclusion that, even at best, this proposition is but a partial remedy, and leaves much to be asked for. We believe it to be but a partial remedy for the following reasons:

First—While we feel assured that the Southern Pacific Company will be ready and willing to do all that lies in its power to give a five-day ventilated car service to Chicago, we realize that it is no easy matter to control the actions of connecting lines. And that, in spite of all your company can do, it may be no more successful in the future than it has been, as a rule, in the past in delivering ventilated cars at Chicago within five days. The same hope was extended the fruit-growers in past seasons; and, with the exception of one or two trains, was never fulfilled. Since the past can be our only guide for the future, we deem it unsafe to place reliance upon the hope of the five-day proposition becoming a permanent, a dependable or an assured fact.

The second reason why we believe this proposition to be but a partial remedy is that but forty per cent of our shipments are sent to Chicago, leaving a balance of sixty per cent of shipments which cannot be benefited by this proposition.

Third—Should the Chicago market, in spite of all efforts, become glutted at the height of the mid-summer season, it would be hazardous to send ventilated cars to Atlantic points, involving two or three days' further delay.

Fourth—There are certain districts in California, such as the San Joaquin valley, which cannot profitably use ventilated cars at any price, for the reason that their fruits must necessarily pass through the great San Joaquin valley at the most heated period, thus seriously affecting the contents of the ventilated cars before they leave the State.

Fifth—There are varieties of fruits, such as Bartlett pears at certain times in the season, and late fall pears, which can safely be sent in ventilated cars to Chicago, allowing eight or nine days in transit. In such cases, the five-day service will be of little advantage, compared with a lower rate for slower time.

For all these reasons, it must be plain that the five-day ventilated car proposition to Chicago at a \$1.25 rate can be only a partial remedy, and, after all, is likely to prove a small and unimportant concession on the part of the transportation companies.

We therefore feel ourselves justified in asking, first, a reduction on refrigerator charges, believing, as we do, that until such time as less costly methods will be devised for the transportation of fresh fruits, the refrigerator cars will largely remain in use.

Secondly, we ask a reduced rate on ventilated cars with, say, eight days service from Sacramento to Chicago.

We anticipate that, on the question of refrigerator charges, your company may take the position, on the one hand, that you have no control over the refrigerator charges, which are made by the refrigerator companies; and that, on the other hand, there is now being perfected, largely under your encouragement, the Perkins system, which will greatly reduce the cost of refrigeration.

Our answer to this would be that, first, we have every reason to believe it is entirely possible on the part of your company to obtain a concession from the refrigerator companies, who, in common with you and with ourselves, realize that the fruit industry has reached a most serious crisis, threatening



the future of the California business of refrigerator companies. We feel assured that they will gladly meet you in a liberal spirit, and comply with any reasonable requests made on your part in behalf of the fruit industry of the State.

The matter of the new Perkins system of refrigeration is, as yet, in an early experimental state, such as would not warrant placing any dependence upon its use, at least for the season of '95, and hence, at this time, does not deserve serious consideration.

So long as California fruit was treated as a luxury in Eastern markets, and so long as the California growers had little or no competition on their peculiar varieties of fruits in the great markets of the East, the question of \$25 or \$50 more or less freight per car cut a comparatively small figure; but a condition has been reached where even the smallest concession in rates becomes of high importance. California has now no longer a monopoly of any of the Eastern markets. Other States and Territories are fast becoming powerful rivals.

Oregon, Washington and Colorado are rapidly coming to the front as important shippers to the East of excellent fresh fruits, and threaten to soon become serious competitors of California; in addition to which the success met with in earlier seasons on the part of California fruits in the markets of the East has aroused the latent energy and enterprise on the part of the fruit-growers of the Eastern and Southern States, who are rapidly availing themselves of the superior methods of California growers in raising and marketing fruits; all in the hope of holding the markets for themselves instead of permitting California to take possession of them.

Thus, aside from the limited quantities of very early and very late fruits, the fight for the supremacy of the Eastern markets between California and other fruit-growing States has become exceedingly keen, and it is now simply a question of the survival of the fittest. We no longer have before us a fancy trade to be served with limited quantities at a fancy price. If California is to cut any figure in the fruit markets of this country, we must be prepared to compete with the great fruit industries of the East, and to supply fruit to the plain every-day consumer of the East at a plain every-day price.

We believe that the California transportation companies could well afford to make the matter of carrying fresh fruits to Eastern markets what the grocer makes of his sugar and flour, and what the dry-goods merchant makes of his calico and his muslin—articles handled with little or no profit, but which, as a policy, brings increased business and increased profits from other directions.

In this age of keen competition, success in commerce, in manufacture and transportation largely lies in knowing where to take of profits and where to put them on. We believe that the commercial and industrial interests of the State could well afford to ask the transportation companies to cut fruit rates in half and to make good such reduction in rates by increasing proportionately the present rates on west-bound merchandise of a non-staple character. A policy such as this would add greatly to the prosperity not alone of the grower, but also to California manufacturers, merchants and transportation companies, by largely increasing the purchasing power of the vast army of fruit-growers, who, directly and indirectly, form a very large proportion of their customers.

We do not, however, ask the transportation company to carry fresh fruits at cost, yet we cannot but believe that, if the railroad companies could afford to carry twenty-six millions of pounds of fruit in 1886 on the basis of \$1.25 rate, it certainly can afford to carry one hundred and sixty million pounds of fresh fruit (over six times as much) at a reasonably lower rate. And this is all we ask on this particular point.

We are informed from creditable authority, that many of the fruit centers off the main lines in the southern part of the State are not called upon to pay the local charges which are absorbed by your company. It must, therefore, be plain that, under these conditions, the fruit-growers who live off the main lines in the northern part of the State are placed at a serious disadvantage; and that, all other things equal, the newcomer to the State would find it to his interest to locate in the southern rather than in the central or northern part of California. Realizing, as we do, that the interests of your company are largely north of Tehachapi, we believe that, as a matter of self-interest, you can no longer afford to permit discrimination to continue against that part of the State in which your interests are so largely centered.

In conclusion, then, permit us to recapitulate and to state what is desired from the transportation companies on the part of the fresh and dried fruit interests of California:

First—We ask that the five-day ventilated car service be in some manner guaranteed.

Second—We ask that you obtain from the refrigerator companies a concession of at least \$50 per car.

Third—That a \$1 rate to Chicago be guaranteed on ventilated cars for eight-day service.

Fourth—That carload lots of fruit for Eastern

shipment be hauled to points on main line on a basis of through rates, instead of local rates.

Fifth—That ten tons be made the minimum amount of cherries to be loaded in refrigerator cars, as experience has shown that twelve tons cannot be properly refrigerated, that it is detrimental to the fruit to be thus overloaded, and in the beginning of the season that it is hard to get over eight tons of cherries for any one car without holding the fruit too long.

Sixth—We ask that mixed cars of dried and canned fruits and nuts be accepted by your company, each variety paying its own rate, instead of the highest rated article establishing the rate for the entire car; and that a similar concession be made on mixed cars of fresh fruits and vegetables.

We ask that this be done to enable us to broaden and widen our markets among the smaller communities throughout the East, who cannot handle carload lots of one variety of product and who, if compelled to pay the prohibitory fractional carload rates on smaller quantities, can do no business.

Knowing, as we do, from your repeated utterances, that you keenly appreciate the necessity and importance of enlarging our markets and thus increasing the demand for California products, and knowing as we do that you stand ready to aid all efforts in such direction, we feel assured you will, if necessary, strain a point to grant this desired concession, the effect of which must be so far reaching for good as to be almost beyond estimation.

Seventh—We finally ask, owing to the woeful depression of the raisin industry, that an emergency rate of seventy-five cents be given on the raisin crop of 1895.

We bespeak for these requests your earnest and most favorable consideration; believing, as we do, that upon the result of your action in the matters now placed before you, will largely depend the future prosperity of the grower, the transportation interests and the State. Respectfully submitted,

FRANK H. BUCK, Vacaville.  
D. T. FOWLER, Fresno.  
H. P. STABLER, Yuba City.  
J. Z. ANDERSON, San Jose.  
B. F. WALTON, Yuba City.  
GEO. D. KELLOGG, Newcastle.  
H. WEINSTOCK, Sacramento,  
Chairman.

## THE FIELD.

### The Great Wheat Problem—No. 2.

#### California Growers Give Their Experience and Beliefs.

As promised in last week's RURAL, we continue the publication of reports from wheat growers in all parts of California concerning their experience of the cost of producing wheat and their views of the wheat situation generally. For the reports we are indebted to the California State Board of Agriculture.

#### COLUSA COUNTY.

C. P. Wilson, Grimes.—I have had considerable experience in feeding wheat to animals, and I see no reason why it should not be so used. At the present low prices for stock I do not think it would be profitable for growers to feed a large proportion of their wheat and market the cattle and swine thus fattened. It would, in my opinion, be more profitable to raise wheat and sell it at eighty-five cents in San Francisco. Land in this county costing from \$30 to \$50 per acre should yield thirty bushels per acre in order to make wheat growing profitable at one cent per pound. Only one-tenth of the wheat land in this county now yields the above amount.

The following figures as to the cost per bushel in the sack are based upon the farmer owning his land, including seven per cent interest, etc.:

|                          |        |                          |        |
|--------------------------|--------|--------------------------|--------|
| 10 bushels per acre..... | \$1.16 | 25 bushels per acre..... | \$ .50 |
| 15 " " " " " " " " " "   | .80    | 30 " " " " " " " " " "   | .40    |
| 20 " " " " " " " " " "   | .60    |                          |        |

Peter Peterson, Sites.—Land should yield from seven-teen to twenty bushels per acre, to make wheat growing profitable in this county at one cent per pound. About one-half of our wheat land now yields this amount.

I find wheat is good feed for animals, especially swine, and I think that, at present prices, it would be more profitable for growers to feed a large proportion of their wheat and market the cattle and swine thus fattened.

Wheat costs me as follows per bushel in the sack, including seven per cent interest:

|                          |      |                          |     |
|--------------------------|------|--------------------------|-----|
| 10 bushels per acre..... | .61½ | 25 bushels per acre..... | .26 |
| 15 " " " " " " " " " "   | .41½ | 30 " " " " " " " " " "   | .22 |
| 20 " " " " " " " " " "   | .31½ |                          |     |

James Deveney, St. Johns.—I think the farmer who depends entirely on his wheat crop will, in a few years, find himself entirely bankrupt. The land in this State does not produce over one-half the crop it did eight years ago, and the crop is getting less every year. If the farmers of this State would only try and drive more big hogs, steers and sheep to market, they could sell all that might be fattened. They should get choice breeds and feed them as they do in the Eastern States. In my opinion, wheat is just as good as corn for feed, and we have thousands

of acres that will grow good corn, and, if desired, it can be mixed with wheat. I am of the opinion that all the Eastern States will feed at least one-quarter of all the wheat they raise hereafter. Many of them think wheat as good as corn, if not better. If the farmers in this State were of my opinion, they would feed at least one-fourth of all the wheat they raise, as I know there is more money in feeding than to sell at one cent per pound.

It costs me, per bushel, to raise wheat, including seven per cent interest, etc., 58 cents for 10 bushels per acre; 15 bushels, 47 cents; 20 bushels, 47 cents; 25 bushels, 40 cents; and 30 bushels, 35 cents.

From \$35 to \$100 per acre is the present value of land upon which wheat is produced at cost named above. Land should yield twenty bushels per acre at the lowest to make wheat growing profitable in this county at one cent per pound, and not more than one-tenth of the land now yields this amount.

If the yield is not twenty bushels per acre, and the farmer has to sell for less than one cent per pound, feed your wheat to cattle and swine for market purposes, the wheat to be ground and mixed with one-fourth barley.

J. H. Langenour, College City.—Wheat costs me per bushel in the sack, including interest at seven per cent on value of land for two years (1 summer-fallow), as follows:

|                          |        |                          |        |
|--------------------------|--------|--------------------------|--------|
| 10 bushels per acre..... | \$ .98 | 25 bushels per acre..... | \$ .45 |
| 15 " " " " " " " " " "   | .66½   | 30 " " " " " " " " " "   | .35    |
| 20 " " " " " " " " " "   | .55    |                          |        |

Twenty-five dollars is the present value of land upon which wheat is produced at above cost. Land in this county should yield from twenty-five to thirty bushels per acre to make wheat growing fairly profitable at one cent per pound, one-third of which now yields this amount. Wheat is an excellent feed for animals alone or mixed with other grains.

At present prices, I think it would be more profitable for growers to feed a large proportion of their wheat and market cattle and swine.

#### GLENN COUNTY.

P. R. Garnett, Willows.—In this county a crop is raised every other year; hence figures given below are for a crop, not for one year:

|                                               |                  |
|-----------------------------------------------|------------------|
| 10 bushels per acre cost me \$5.20, or \$ .52 | per bushel.      |
| 15 " " " " " " " " " "                        | 5.50, " .37½     |
| 20 " " " " " " " " " "                        | 5.80, " .29 1-10 |
| 25 " " " " " " " " " "                        | 6.40, " .25½     |
| 30 " " " " " " " " " "                        | 6.93, " .23 1-10 |

The present value of land upon which wheat is raised, at the above figures, is from \$15 to \$40 per acre. One-half of the land in this county now raises twenty bushels per acre, which makes wheat growing fairly profitable at one cent per pound.

During my experience in feeding wheat I find that it will fatten hogs quicker than corn or barley, but the bacon will not be quite so good. It can be fed mixed, or by itself. I fed wheat to hogs this year with profit.

The railroad company ought to make a reduction in freight of at least fifty per cent. We are paying the same price now as when wheat was worth \$1.50 per hundred pounds, whereas steel rails and everything pertaining to the construction of a railroad are now from twenty-five to fifty per cent lower than they were then. Congress has helped to build up the manufacturing interest; now let the Government lend its aid to the agricultural interest, and help the farmers onto their feet. When I, or any other farmer, work in the field, I am competing against men who are receiving only ten cents per day. I submit the following figures:

| <i>Cost of 10 Bushels Per Acre.</i> |        | <i>Cost of 30 Bushels Per Acre.</i> |        |
|-------------------------------------|--------|-------------------------------------|--------|
| Plowing.....                        | \$2.00 | Plowing.....                        | \$2.00 |
| Seed.....                           | 1.00   | Seed.....                           | 1.00   |
| Sowing.....                         | .50    | Sowing.....                         | .50    |
| Harvesting.....                     | 1.00   | Harvesting.....                     | 1.00   |
| Sacks.....                          | .30    | Sacks.....                          | .75    |
| Hauling.....                        | .40    | Hauling.....                        | .90    |
| Total.....                          | \$5.20 | Total.....                          | \$6.55 |

F. M. Lutts, Willows.—Wheat costs me 43½ cents per bushel in the sack, which includes interest at seven per cent upon value of land, the present price of which is \$30 per acre.

In order to make wheat growing fairly profitable in this county at one cent per pound, land should yield twenty bushels per acre. Probably one-third of the wheat land in Glenn county now yields this amount.

I have had very limited experience in the use of wheat as feed for animals; but if fed carefully, all kinds of stock thrive better on it than any other grain.

I have only one suggestion to make, and that is if economy had been a study of our farmers, the low prices would not be so oppressive. If a man does not save in prosperity, he is sure to suffer when adversity comes.

#### SOLANO COUNTY.

R. J. Currey, Dixon.—I would like to state here that I do not think anyone can make an estimate of the cost of production of wheat that will answer for producers generally. For instance, I had in December forty mules and six men, which were unable to do any field work during three weeks owing to incessant rains. Who pays for their board and other expenses attached to keeping a force like that doing nothing? Surely, the crop. If a farmer could hire his work done at the figures given in my estimate, it would be to his interest to do so. The difficulty is



that the necessary force cannot be secured when wanted. The wear and tear of buildings and fences must be met from some source. I should say an allowance of one dollar per acre in grain would not be too much for this deterioration. The exhaustion of the soil is also worthy of consideration.

Wheat costs me per bushel in the sack, including interest on value of land, as follows:

|                      | Winter sown.         | Summer fallow.    |
|----------------------|----------------------|-------------------|
| 10 bushels per acre. | \$1.08 $\frac{1}{2}$ |                   |
| 15 " " "             | .73 4-5              |                   |
| 20 " " "             | .56 3-5              | .87 $\frac{1}{2}$ |
| 25 " " "             | .47 $\frac{1}{2}$    | .71 $\frac{1}{2}$ |
| 30 " " "             | .40 $\frac{1}{2}$    | .60 $\frac{1}{2}$ |

Sixty dollars per acre is the present value of land upon which wheat can be produced at above cost. The land near Dixon now yields twenty bushels per acre (winter sown) and thirty bushels (summer-fallow), which makes wheat growing fairly profitable in this section at one cent per pound.

Have had no experience in the use of wheat as feed except for hogs. At present price of hogs (three cents) I do not think it would be profitable for growers to feed a large proportion of their wheat to swine for market purposes.

I submit the following estimate on cost of ten bushels per acre, winter sown—land assessed at \$60 per acre:

|                                                                |         |
|----------------------------------------------------------------|---------|
| Interest at 7 per cent                                         | \$4.30  |
| Tax (\$1.56 per \$100)                                         | .93     |
|                                                                | \$5.13  |
| Interest and taxes                                             | \$5.13  |
| Plowing                                                        | 2.00    |
| Harrowing twice                                                | .50     |
| 100 pounds seed, cleaned, bluestoned and sowed (present price) | 1.00    |
| Four sacks, at 6 $\frac{1}{2}$ cents                           | .26     |
| Harvesting                                                     | 1.75    |
| Hauling and weighing                                           | .21     |
| Cost per acre                                                  | \$10.35 |
| Or \$1.08 $\frac{1}{2}$ per bushel.                            |         |

These figures represent about what the work could be hired done for.

By allowing for more bags, more for hauling and weighing, we have:

|                                        |                     |
|----------------------------------------|---------------------|
| For a yield of 15 bushels, winter sown | \$11.07             |
| " " " " "                              | 11.32               |
| " " " " "                              | 11.83               |
| " " " " "                              | 12.08 $\frac{1}{2}$ |

When we come to summer fallow, two years' interest and taxes must be allowed; also at least \$1 per acre for extra plowing, etc.

## THE DAIRY.

### Alfalfa in Kern County.

C. L. Conner, Bakersfield.—I have grown alfalfa for the past twenty years, with from 1,000 to 12,000 acres, some on sandy loam river "bottom," and some on sandy desert lands. The plant is most productive on a sandy or loose loam surface, with a clay subsoil five or six feet below the surface, which assists in retaining moisture. Hardpan, when eighteen or twenty inches below the surface on irrigated land, does not materially affect the growth of the plant; but there is no profit with alfalfa on cold, wet ground. On lands here that have never been irrigated, the surface is always dry, sometimes to a depth of six or seven feet, but below that moisture continues until water is reached.

**Sowing.**—Our California lands require no fertilizing for alfalfa, and the method of seeding is very simple. In December or January we plow the land to a depth of, say, six or seven inches, and about the 1st of February we sow thirty pounds of wheat or barley to an acre, harrowing thoroughly one way; then sow about eighteen pounds of alfalfa seed, harrow lightly, and, if the surface is rough or cloddy, pass a light roller or clod breaker over the field, leaving it in suitable condition for the mowers, as well as insuring the best retentment of the moisture.

The seed may be sown any time during February or March, and the grain and young alfalfa should be ready to cut by the first of June, yielding about two tons to the acre—principally wheat or barley. We then irrigate, and by August 1st the alfalfa should be ready to cut, and will yield about three-fourths of a ton of hay to the acre. By the middle of October, we cut it for the third and last time that year. If allowed ten days to grow it will then furnish good pasturage for all kinds of stock, if care is taken not to pasture it after heavy rains or during the forenoons, when the grass is moist with dew. The precaution is taken because of bloating, although in this dry climate, where the rainfall is not more than five inches during the year, there is little trouble from this source, and we allow the stock to run on the fields during all the months of the year.

**Irrigation.**—By seeding in February we expect to have sufficient rain to bring up the crop and keep it growing until grain is about six inches high, after which one irrigation will mature the grain and keep the alfalfa alive. The second irrigation is given as soon as possible after the hay is removed from the field, and the third after the second cutting, the water being passed quickly over the land, and not allowed to stand but four or five hours. To accomplish this, use a large head of water, rush it over the surface, and remember that it is as essential to get the water off as it is to get it on, allowing no lakes or

ponds to remain longer than a few hours, else the plants will be drowned. Our source of water supply is the Kern river, but farms located so as not to admit of the use of this are provided with pumping plants, using the "Byron Jackson Centrifugal Pump," usually a No. 6, with a six or eight-horse power engine, lifting the water from fifteen to twenty feet. Such a plant can furnish water sufficient to irrigate about ten acres a day, where the land is properly leveled before seeding.

Too much stress cannot be laid on the importance of leveling the ground, so as to allow the covering of a large surface with a small quantity of water. It is better to have the water one inch deep than a foot deep. Irrigation gives quantity, while quality depends largely on the curing. The plant is in its prime after the first year, and under proper treatment will last a lifetime, though the best results are obtained by plowing and reseeded seventh or eighth year. With a damp soil and a rainfall of from ten to twelve inches, the crop will not need more than one irrigation, and that more to drown out the gophers than for any other benefit.

**Hay Making.**—We cut our crop of old alfalfa about the 1st of May, and expect about one and a half tons to the acre; then we can cut every sixty days after until the cold weather sets in—about the middle of October or the 1st of November. We usually cut the first crop for hay when it is well blossomed and the bloom of a deep blue; and when we wish to cut for seed we do not irrigate, as a heavy growth of grass will not produce seed. We never think of using a new field for seed, but much prefer an old one with about half a stand, and do not crowd the growth. After taking off the first crop of hay, say between the first and middle of May, allow the seed to grow and mature the seed pods until some time between the middle of September and first of October, and then, under favorable conditions, there will be ripe, half-ripe and green pods and blossoms on the alfalfa when it is cut for the seed. The mowing should not be done until the older pods show signs of shelling out. Here, where we have no moisture in the atmosphere and the temperature is 110° in the shade, we rake about two hours after cutting, cock up immediately, and haul in three or four days. The hay should be thoroughly wilted, but not dry, before raking, and the curing should take place in the cock. When this is properly done the hay can be stacked in any form desired, with no danger of heating. Good alfalfa land near here is worth from \$75 to \$100 an acre. The cost of the application of water, when properly used, is about ten cents per acre, and the cost of the hay in the stack is about \$1.25 a ton. Contractors furnish machinery, labor, wire, and board and bale the hay for \$2 a ton. Preferred bales weigh 175 to 180 pounds, and baling in no way affects the keeping quality of the hay, which, if kept dry, will remain sweet and nutritious for several years. Good hay, baled and delivered aboard ears, is now selling for \$8.50 a ton, and a fair average for a number of years would be \$6 a ton.

**Seed.**—A good stand of alfalfa should yield 500 pounds of seed per acre. We do all our own threshing with our grain separators, Pitt's being the favorite. An average price for the seed is about \$5 per bushel. There is about the same difference between the hay and the straw that there is between wheat hay and wheat straw. To rid a field of a stand of alfalfa requires a strong plow and a strong team, but when it is plowed and cross-plowed, planted to corn, and thoroughly cultivated for a season, the field will be clear of alfalfa.

**Pasturing.**—The pasture is profitable and satisfactory for horses and sheep, and hogs do remarkably well on it during the spring, summer and fall months. To pasture hogs to the best advantage there should be several inclosures, in which the grass is kept young and tender by cutting for hay and by irrigating. With such an arrangement, so that the hogs can be changed from one lot to the other, the fields will be kept in good condition, and ten to twelve head of shoats should be carried through the spring and summer months for every acre of good alfalfa. While they will not be fat for the butcher, they will be in good growing condition. During the spring months cattle and sheep are liable to bloat, and as it is better to prevent the trouble than to try to cure it, we keep the stock off during wet weather and when the dew is on. Experience has taught us to salt our stock liberally while pastured on young alfalfa, and we find that cattle and sheep do better at all times of the year when some rough, dry feed can be had in connection with the green. Hay or barley straw, placed in mangers so that they can have free access to it, may save the life of many a good animal. I would also recommend, where the acreage is small, that no stock be allowed to pasture on the alfalfa at any season of the year; but instead, mow the alfalfa every day and haul it to the stock in some less valuable field—some old, worn-out pasture or timber lot. Horses, cows, sheep and hogs will all take kindly to it and thrive upon it, and the cutting can be made first in the spring when the plant is only six inches high. During wet weather it would be better to feed the alfalfa in shallow mangers, but in dry weather it could be scattered on the ground. Give them all they will eat up clean; do not waste it, and the stock will do well, with no loss from bloat.

A twenty-acre field managed in this way will carry double the number of stock that could be pastured. A farmer should take some interest and pride in doing this cutting, laying off a strip each day sufficient to feed his stock, and he will find that in a very few days he can go over the same ground again, continue this treatment from early spring until the frosty weather sets in, and obtain some hay besides.

## AGRICULTURAL ENGINEER.

### Good Roads a Simple Proposition.

TO THE EDITOR:—The farmer learns to depend on himself for a great many things in life, but for roads, fortunately or unfortunately, he has to depend on others. The Government, in some shape or other, is supposed to make and maintain these. A convention, composed largely of county officials, last week discussed at Sacramento for two or three days the question of good roads.

I have been for a quarter century practically studying this question as one who has to haul orchard produce ten miles to wharf or railroad depot, over a hilly road, not one mile of which was metalled until the last few years, and only about two miles now.

It seems to me that, as a rule, we are not suffering much from any dearth of engineering science, but more from lack of good common sense and active public spirit.

There are four main essentials to insure good roads:

1st. That the roads are laid out as nearly level and straight as the face of the country permits.

2d. That they are made crowning (high in the middle), and well ditched on one or both sides, as the case requires.

3d. That they are amply supplied with culverts, properly placed and sloped so as to drain the road thoroughly.

4th. That they are, if possible, "metalled" with suitable material, such as broken rock, gravel, etc.

With your permission, I will "expatiate and expand" a little under each of these heads:

1st. In the laying out of roads *viewers* should be appointed who are familiar with every inch of the country where the proposed road is to pass. They should know exactly where the highest grades are attainable, and where the soil is most suitable both for summer and winter travel, that the road may not be all dust in summer and all bog in winter.

Frequently too much dependence is placed on the county surveyor. He comes usually in a hurry, and finds the other viewers unprepared to pilot him exactly in the best course, so he has to take the lead, and often points his machine where the survey may be easiest run so as to avoid brush, etc., instead of paying due regard to the best site for the road. Let the other viewers view the ground before the official survey is made, and then intelligently lead the county surveyor as their local knowledge instructs them. Also let the viewers be men with some practical knowledge of roads, *not needy village politicians*.

2d. That a road should be crowned in the middle, and so kept, is essential to its being waterproof, and to its remaining unguilted by the winter's rains. Too many of our country roads are made just the reverse—hollow in the middle—and in this central depression all the accumulation of surface water pours, cutting an ever-deepening gully. The usual road-mending consists in shoveling some dirt into this gully about April or May, when the rains are all over. Passing vehicles reduce this loose dirt to dust, which annoys travelers all summer and is blown away before winter.

After the first rains in autumn ditches should be thoroughly cleaned out with the machine grader (and plow if necessary), and the ruts filled with the material thus obtained. The culverts should be kept open and the road will remain good all winter if it is adequately crowned and ditched.

3d. This brings me to my third point—the culverts. Culverts are used too sparingly on most roads, for the salvation of the road is the culvert. They should be sized with due regard to the volume of water which the heaviest storms precipitate on their particular watershed. The top board should be cut in short pieces and nailed across the under boards. If put on lengthwise, as is commonly the case, it is very apt to split under the pressure of passing teams, and the culvert becomes choked with dirt and splinters and is useless. Culverts should, if possible, be buried at least a foot beneath the surface of the road, for, if only a few inches of earth covers the boards, they are more apt to break and the thin layer of earth easily becomes pulverized and blows away, leaving a "chuck hole" over the culvert thus increasing its chance of damage.

4th. Under our present system of road management the "metalling" of country roads, except in the more populous parts of the State, is almost out of the question. For some districts rock is not to be



had except from such a distance as to be prohibitory. Many roads, however, can be much improved by the judicious admixture of sand or gravel on clayey spots and of clay on sandy stretches. The clay causes the sand to cohere or cement and become firm, while the sand renders the clay less greasy and sticky, giving the horses better foothold and preventing the formation of mud. Gravel composed of decomposing granite is used for road-metal around Monterey, and gives great satisfaction where the traffic is not too heavy.

Where metalled roads are unattainable at present, the great point is to get the roads in order before the rainy season ends, so that they may set hard and compact before summer. Wide tires are things much to be desired on heavy wagons, but the need for these would be less if teamsters would not all drive in the same rut, but each make fresh tracks for his team. The whole roadbed would become equally hardened and smoothed, and would be less apt to become the agglomeration of ruts and chuck holes, which now too often ruins our teams and wrecks our tempers.

"Keep out of the ruts!" is a pretty good motto for life even for those not teamsters.

Carmel, Feb. 12, 1895. EDWARD BERWICK.

## THE APIARY.

### California Bee-Keeping.

In a recent convention of bee-keepers in southern California, Prof. A. J. Cook of Claremont delivered an address, from which we take the following extracts:

Last year I addressed you as one new to this region and its resources, and presented California apiculture as it appeared to my unprejudiced eyes. I am yet young among you, but I have now some observation and some knowledge of my own; and, though my outlook has been upon one of the most discouraging seasons ever known to our region, yet I am more sanguine regarding the grand future of the bee-keeping industry of California than I was one year ago. From a careful investigation of the records, I believe we can count on a honey harvest of unrivaled proportions for at least three years out of five; that we can safely reckon on a good profit two years out of three, and if our management be wise, we need never be under the necessity of feeding our bees. If the past year is a criterion, our bees can fly every month of the year and gather honey even in the months of November, December, January and February. Thus the problem of safe wintering is solved for us by our marvelous climate. Warm sunshine and nectar-laden bloom come with as much salubrity to the bees as to the people, and will prove—are proving—of signal service in giving to our favored region a reputation that must soon crowd our beautiful valleys with the best citizens of our country. Certainly, if we except Florida, no part of our country offers so much to entice the ambitious bee-keeper as does our own sunny southland of the Golden State.

I believe I have proved the past year that bees are a sine qua non to successful fruit culture. Southern California is ever to be the pomologist's paradise. As soon, then, as our pomologists know the real truth, they will court the presence of the apiarist. Already I find the fruit growers ready to acknowledge that bees are a requisite to their best success. Thus, California, more than any other State in our country, needs, and must have, the bees. This fact will give added glory to our pursuit.

**Diseases.**—The only two drawbacks to positive success on the part of the cautious and intelligent apiarist, as it seems to me, are the two diseases "foul brood" and "bee paralysis." These are no worse in California than elsewhere, and, as I believe, we have intelligence among our bee-keepers that is unsurpassed in any region of the world, we need feel no serious alarm or apprehension because of these diseases. Disease finds its greatest foes in culture and intelligence, and so these two microbe maladies must suffer a fitful and precarious existence among us. The third disease, "new bee disease," that invaded our apiaries last season, destroying the brood, if it were not caused by insufficient honey to feed the brood, readily succumbed to feeding, and so need give us no uneasiness. We may then, brother bee-keepers, heartily felicitate each other in our location, no less than in our business. We are also to be congratulated in the fact that we may know in advance what our prospects for the season are, and so plan that our cloth and garment shall harmonize. The present winter of abundant rains insures a crop this coming season. We know that we shall have the nectar-secreting bloom, so that our supers will fairly bulge with the rich harvest of delicious honey. In the East no one can prejudge the season, and so every bee-keeper must provide a full equipment of supplies, which he may not need for one, two and, in rare cases, for even three years. Last winter we knew from the scant rainfall that no harvest was to be gathered. We therefore lessened our embarrassments by curtailing expenses, and reduced our loss to the minimum. We rejoice, then, that we are in

the region of largest harvests, of fewest failures and where failures give long notice of intended visits.

**Better Bee-Keeping.**—But there is one serious obstacle, and I hope not an irremedial one, to the best success in California apiculture. The profits are so large, the required attention so slight, the necessary capital and risks so insignificant, that many people with little knowledge and no enthusiasm secure bees, locate them in some region of safe or other bloom and give them no attention except for a brief season just in the time of the honey harvest. In many cases, as I positively know, the bees are not even visited for months; and in case of a drouth like that of last season, over a year passes by without a single examination being made. Of course such neglect breeds danger. Foul brood may run riot, as it frequently does, and so the entire bee industry of the region becomes imperiled. Is this right or just? Is not any bee-keeper rightly denominated a nuisance who gives his bees no care or attention except for a few days each season? I know of apiaries rotten with foul brood that were left with no care or examination all last season—just the season for robbing and the spread of the malady. One owner sent a person of no bee knowledge or experience to equalize stores in the autumn. Combs nearly empty of honey were removed and set down outside the hive. I examined some of these combs, and found them reeking with foul brood. A most desirable reformation then in our California apiculture, as I believe, is that those unqualified and indifferent bee-keepers be weeded out of the brotherhood, and that every apiary shall have a bee master, as they call them in Europe, who shall be constantly in communication with his myriad of servants. Doubtless this is beyond the pale of legislation, but I sincerely wish that we had some law, moral or civil, that would require every apiarist to live at or near his bee-yard, and that he should give to his bees such frequent attention that freedom from disease would be insured and the apiary prevented from becoming a seed bed for developing and distributing fungoid maladies. Is it possible, under the present "foul brood act," to effect something in this direction?

**The "New Bee Disease."**—The malady which appeared among us last season, which affects the brood certainly, and the mature bees possibly, surely succumbs at once to feeding. From my observation, I was led to ascribe this disease to lack of food. I thought it starvation. I found it only in colonies with almost no honey. It disappeared at once upon feeding. I fed honey medicated in several ways, but found that honey alone or sugar syrup were just as effective to banish the malady. That bees with very little honey should neglect perforce to properly feed the brood, so that the latter should die from starvation, seems not improbable. That the imago bees might die prematurely, because they were insufficiently fed while in the imago state, is likewise a reasonable supposition. Enough food might be given them to develop maturity, though not enough to insure health and strength. We know that bees, when there is no nectar afield, work with less of vigor. And so might it not be barely possible, in rare cases, even though the bees had honey, they would feed so sparingly and with such lack of courage and ambition that the same result would occur? I saw no such case, but think such an event might possibly occur as the result of long enforced idleness in the hive.

Unfortunately, the editor of one of the bee journals referred to my article on the "new bee disease" as pertaining to "bee paralysis." And so many writers have attempted to set me right. Of course, any intelligent reading of my first article would have set these writers right. "Bee paralysis" shows its terrors in the mortality of the old bees. This new bee disease is most apparent, if not exclusively manifested, in the larvæ of brood. In some few hives which I observed there were also numerous dead bees in front of the entrance such as are observed in "bee paralysis." I wondered then, I wonder still, if these bees did not die of the effects of stunted nourishment while developing in the brood cells. I feel very certain that this "new bee disease" is no menace to our future prosperity as bee-keepers. Henceforth we will leave enough honey in each hive every autumn to bridge over seasons of drouth and no nectar secretion. If we are thus wise, I have no fear of a re-appearance of the "new bee disease."

**Honey Eucalyptus.**—I was pleased in November and December to find that the bees were collecting considerable honey. This had gone on even to date. Upon examination I find that the source of this honey is *Eucalyptus longifolia*. This tree is much cleaner than the common blue gum. *Eucalyptus globulus* is beautiful in foliage and form, has a smooth bark, and from its showy blossoms, which last all winter, is an exceedingly desirable tree for roadside planting; but it is also a very fine honey plant. I am sure that we may all wisely urge the planting of this eucalyptus. It may well become the California linden. Aside from its quality as a honey tree, it is also one of the most desirable of the gum trees because of its grace and beauty.

I have also heard that another species of gum, which blossoms in June and July, is a serious apicide. If any present know aught of this species, I shall be glad to hear from them.

## THE POULTRY YARD.

### Answers to Correspondents.

**TO THE EDITOR:**—I would like to know a point or two about poultry. First, I would like to know when to set hens, so as to have chickens lay when eggs are high. I am told that now is about the right time. Second, I have a little yard which is about twenty feet long and fifteen feet wide which I can put young chicks in when the hen first gets off from sitting. How long would you keep them shut up in a coop with the old hen? I have all sorts of breeds mixed together, and I do not believe that it matters much if you do not have certain breeds if you set your hens at the right time.—M. A., Eureka, Cal.

#### ANSWER.

1st. If your eggs were from the Asiatic breeds, such as the Brahmas or Cochins, if set now, they would be laying about October or November; but if they were from the Spanish breeds, such as the Leghorns, they might lay in July or August.

2d. Let the chicks stay with the old hen as long as she will take care of them.

To your last remark I would say I think it is foolish to rear birds of no breed whatever, which, having no special characteristics, are neither suitable for one purpose nor the other. This is a most important matter; and, as an illustration of the mistakes often made in this way, I may mention that I once read of a poultry farm commenced under most favorable auspices, situated within a short distance of a large manufacturing town, where eggs could be sold in any numbers at high rates. The ground laid out for the farm was in many respects very suitable, and the houses and runs were designed with considerable amount of skill and foresight. The owner, however, who was thus careful in almost everything else, suddenly became negligent when he began to stock his yards, and, instead of buying a few birds of a good laying breed and breeding from them as many layers as he required, he went into the market and bought some hundreds of hens, paying no regard whatever to age or breed. It is true that he got them at a less rate than he could have bought pure bred stock, and he began to get returns from the sale of produce at once, which he could not have done had he bred his stock. But the returns were miserably small; the bulk of the hens soon wanted to sit, and more hens were bought in order to supply the demand for eggs. Disease crept in through overcrowding, and the balance-sheet showed a very decided margin on the wrong side. Dishcartened and disgusted, the owner soon turned up the whole affair a sadder, a poorer, though perhaps not a wiser man. Such instances as these could be multiplied to almost any extent, and it has probably been more due to want of knowledge or thought that the idea has taken root that poultry keeping does not pay.

There is an idea very prevalent that cross-bred poultry are much more profitable to keep than pure bred ones; and while there can be no question that it is a decided advantage to cross certain breeds, one with another, in order to obtain specific results—that is, of course, if the crossing is scientifically and skillfully performed, having an end in view—this is altogether different to the breeding of mongrels, which is so common. In the former case there is method; in the latter there is none, and it is to this indiscriminate crossing that we owe the present degenerate races of farmyard or barnyard fowls—small, subject to disease, poor as layers, equally as useless on the table, and certainly neither profitable nor creditable to the owner. The first cross may be useful, if properly made, but it has been found as the experience of many that if these are bred from, the progeny deteriorates, both in fecundity and size, with every generation. The basis of every yard should be pure bred stock; but, where there is room, these should only be used for breeding layers or table fowls. If only a few can be kept for home consumption, then I should advise that crossing be not attempted, but only pure-bred birds kept, unless there is some means of getting the cross-bred ones at a reasonable price, with the certainty that they are as represented.

#### SUPPOSED TO BE BRAHMAS.

**TO THE EDITOR:**—Having a small pen of what are supposed to be pure-bred Brahma fowls, I should be obliged if you or any of your readers could tell me, through your paper, what is the value of a setting of their eggs, as at present prices I imagine it would be more profitable to sell the eggs for this purpose than eating them.—I. B., Penryn, Placer Co., Cal.

#### ANSWER.

With all due respect to the writer of the above, I would say that what are supposed to be pure-bred Brahmas by some would not be considered fit for anything but the boiling pot by those who know what a pure-bred Brahma is. If your birds are really thoroughbred stock fit to be seen at a show, their eggs would be worth from \$2 to \$3 per setting. If, on the other hand, they are merely good-sized, nice-looking birds, with enough of that strain in them to show that they belong to the Brahma family, but not within a mile of the standard when it comes to their markings, 50 cents per setting would be a good price for their eggs, and they should only be sold to people who could see the fowls. Much ill-feeling has often been caused by parties selling eggs from what they supposed to be thoroughbred stock, but which turned out to be far from satisfactory to their customers.

Alameda, Cal.

H. F. WHITMAN.



## THE HOME CIRCLE.

## Mrs. Lofty and I.

Mrs. Lofty keeps a carriage,  
So do I;  
She has dapple-grays to draw it,  
None have I;  
She's no prouder with her coachman  
Than am I,  
With my blue-eyed, laughing baby,  
Trundling by  
I hide his face, lest she should see  
The cherub boy and envy me.

Her fine husband has white fingers,  
Mine has not;  
He could give his bride a palace  
Mine, a cot;  
Hers comes home beneath the starlight,  
Ne'er caresses she;  
Mine comes in the purple twilight,  
Kisses me,  
And prays that He who turns life's sands  
Will hold his loved ones in His hands.

Mrs. Lofty has her jewels,  
So have I;  
She wears hers upon her bosom,  
Inside I;  
She will leave hers at death's portal,  
By and by;  
I shall bear my treasure with me  
When I die;  
For I have love, and she has gold;  
She counts her wealth—mine can't be told.

She has those who love her—station,  
None have I;  
But I've one true heart beside me—  
Glad am I.  
I'd not change it for a kingdom,  
No, not I.  
God will weigh it in his balance,  
By and by,  
And then the difference he'll define  
'Twixt Mrs. Lofty's wealth and mine.

—Mrs. C. Gildersleeve.

## Miss Hardy's Valentine.

Miss Hardy did not believe in saints. In fact she was very skeptical about a number of things that have been considered by many persons as necessary to the pleasure of the every-day life of the world. Giants and fairies she abjured; and as for Santa Claus, she had rigidly shut her eyes and ears to any pleading as to the personality of that mythical being.

So it happened that Sally Minto was prepared by discipline to be as skeptical as she in regard to a saint who, Tommy Darrow declared, reigned over a certain day in the second month of year.

"I tell you, there ain't no such thing," she reiterated, for the third time, to her informant, over the back fence.

"Who sends the valentines, then, I'd like to know?" Tom put the question triumphantly. He had had some experience in convincing people against their will, and he liked to tease Sally.

She was speechless. Her acquaintance with the doings of the saints in dispute was limited: so she was not prepared for argument, only for sweeping denial.

"Some one must," continued Tom, following up his advance. "And he must know all about the folks to do it, or they wouldn't get what fits so close. You remember Pettybones?"

Yes; Sally remembered him—a little, dried-up, old man, cross as a bear. He had set his dog on her in the fall when she was gathering chestnuts. Of course she remembered Pettybones, and just then she wished some one would send him something awful, for Sally's creed was, "Do unto others as you are done by."

"Well, he got the worst looking thing you ever saw—the ugliest old skeesicks chasing some boys, and a big bull-dog ready to snap at him."

Sally laughed. She was really glad of it.

"Do you suppose this Saint Valentine had anything to do with it?" she asked, a little less incredulously.

"Had? Of course," asseverated Tom. "How else could he get such a good picture?"

"I didn't know but folks—boys like you—done it."

"Heigho, Miss Sally! So you are really beginning to see through it. Now did you really suppose a real saint sent it?"

"No, I didn't," snapped Sally. "I 'sposed you was foolin'. You always are. Miss Hardy says there ain't no sech thing, and Miss Hardy's right. A saint wouldn't do no sech tricks as that,

so she says. I wish there was, though," she ended, thoughtfully.

"Why, Sally! Don't you and Miss Hardy get along lovely together? I thought you two agreed," Tom provokingly responded.

"She don't ask me to, she just makes me," replied Sally, with a shrewd divination of what righteously constituted an agreement.

"Why don't you even up, then? Now's your chance. You can take it out in a valentine if you can't talk back," suggested Tom, warily.

Sally did not answer just then. She was too busy thinking of a good many things. Her mind was running through Gamble's stock of valentines at the corner below, through her six months of life with Miss Hardy, back to the years of poorest poverty, and want, and even crime. She remembered that she had once stolen a loaf of bread, and how the mission teacher told her how wrong it was, and then Miss Hardy came to take her. She remembered how lonely it was with the stern mistress of the farmhouse—so lonely she sometimes thought that she would rather go back to the poverty if only some one would seem to love her a little. And the last thing she pondered over was that Miss Hardy had slapped her that morning. That had brought her out in the snow to hold converse with Tommy Darrow over this crowning grievance; but Tommy had started a new train of thought in his endeavors to be sympathetic. Sally suddenly made a resolve.

It took three little stories to get away from Miss Hardy that morning. So barefaced and transparent were they, that grim Miss Hardy softened a little and told her so by her actions.

"Why don't you say an' done with it that you want to go to the store an' spend that cent you've got?" she exclaimed. "Go 'long an' do it."

Sally said it; and she was never quite sure whether the stories helped her because they were stories or not. But she had more than a penny. Two ten-cent pieces lay tied up in the corner of her handkerchief with it, for Sally was not quite sure of the expense attending the carrying out of her malicious project, and, as she had started to carry it out, she did not mean to be hindered by anything less than twenty-one cents. She had made the money by selling berries, and if she cringed once or twice at the thought of parting with it, she was immediately consoled in thinking of the justice in the undertaking, and the fact that another summer was coming with more berries.

Gamble's stock of valentines was not of the choicest, and even Sally found a selection a difficult matter. Tom and a half-dozen others essayed to help her, but nothing suited her. One wore goggles, another was assaulting an unoffending man, a third was immensely corpulent, and still another showed a scoop-shovel crowned giantess bearing a carpet bag. Nothing fitted Miss Hardy unless it might have been the horrid verses that Sally could not read with any facility. She was looking for Miss Hardy's photograph, and she did not find it. Nothing short of accuracy was desired—that was enough she thought. So while the others were still turning over the cheap leaflets, she sought the show case.

"My! ain't them pretty!" she exclaimed, feasting her eyes on the few lace paper affairs adorned with hearts and cupids and roses. "That's jest the prettiest thing! What's them for?"

"They're valentines, too," said the obliging clerk, taking out one and holding it up to her delighted gaze, but out of reach of grimy hands.

"Them valentines?" Sally was prepared to be skeptical concerning this. She had only associated valentines with the caricatures on the other counter. Of such dainty affairs she had no knowledge.

"You sends them to folks you love and who love you, Sally." Tom was at her side with sarcastic suggestion.

"S'pose you invest for Miss Hardy?"

"How much be they?" she asked, when Tom skipped back to the next counter.

"This big one is one dollar, and this

little one"—heaving a sigh—"it's only twenty-five cents."

Sally felt of the two silver pieces and thought over this new revelation of St. Valentine's character. A saint ought to be somebody good, she reasoned, and he ought to bring good things. She suddenly became positive that those caricatures over there would not do it.

"And I could see it myself, sometimes," she argued to herself. Then aloud: "I hain't got but twenty-one cents," she faltered.

The clerk raised an edge of the coveted one and disclosed a torn piece of lace beneath, which he seemed to discover for the first time.

"Seeing it's torn, you may have it for twenty. You'll want a penny to send it."

"Gimme it." Sally cast a furtive glance at the others. It would never do to let Tom know. She dropped the money quickly into the man's hand and thrust the envelope under her shawl. When Tom looked around again she was not there. She could be postman herself and save the penny.

"Mean thing—not to show us what she got! Sally's sly," he muttered, and went home with the determination to warn Miss Hardy of her impending valentine.

If Sally looked at the lace-paper bit once that night, she did so a score of times, and the more she looked, the more convinced she became of the wisdom of both her expenditure and choice.

"I don't see how she can box me after she gets that," she decided, as she reluctantly parted with it for the last time and slipped out to put it in the box nailed to a tree outside—Miss Hardy's receptacle for the mail old

Joe Sharp brought up the hill daily as he came by from the office.

Then she abided results.

Miss Hardy had been warned. Tom had found an errand over the back fence as Sally was thus busy, and when she came back to the house, Miss Hardy greeted her so sharply she was only upborne by the conviction that it couldn't last long.

"If it does," said she, wiping off a tear that trickled down and threatened to fall on the lamp chimney she was polishing, "I can run away back to the city."

Miss Hardy was not what might be called curious, but old Joe had not left the box before she went out herself to get its contents. As she turned them over, she thought for the moment that Tommy had enlarged his statement to her beyond truthful boundaries. The large, square envelope was not at all like the dingy, yellow one she expected, for Miss Hardy had received such valentines before. But that assuredly was Sally's printing. Miss Marsh had taught her that much in six months—a matter, to tell the truth, of pride to both.

"She's sly," she inwardly commented, in unconscious repetition of Tom's opinion.

She took it straight to the sitting-room. She had no idea of giving to Sally the satisfaction of seeing her gaze upon the awful thing—for she knew it was awful, and she was growing curious to see what was Sally's idea of her. She opened the envelope with her scissors and drew out the enclosure with her finger-tips, while upon her face there crept an expression boding no good to the sender. It was fully twenty minutes before she laid it down again.

Sally wished she wouldn't take so

## Its Fame Will Live.



The World's Columbian Exposition marked the climax of human achievement. It will live in memory of the crowning glory of modern times. No other development of the closing century can compare with it in practical benefit to mankind.

Who that exhibited is not proud of it? Who that failed to exhibit does not regret the omission? The former are the people of to-day. The latter are relics of the past.

No honor so high as that embodied in an award at the fair. Competition was world-wide, the fruits of ripest experience and noblest endeavors were submitted for examination.

Honest tribunals, composed of eminent scientists, examined and passed upon the claims of exhibitors. Their judgement based on inquiry and justice, proves conclusively the value of any article they commend.

Their approval was stamped on

## Dr. Price's Cream Baking Powder

It received the highest award at the fair from a jury headed by the Chief Chemist of the U. S. Department of Agriculture. Dr. Price's was officially commended for highest leavening power, purity, keeping qualities and general excellence.



long; but then she was glad she did not come while she was scouring the knives, because that was a harrowing task to carry out with Miss Hardy watching. The latter finally straightened herself up in her rocking-chair and looked in the glass opposite—looked to see a stern face outlined by a thin nose and set lips, overlooked by eyes that had only keenness in them. The inventory over, she leaned back with the musing remark: "I wonder if I could; I believe I'll try it."

Sally heard her coming back to the kitchen with fear and trembling. She asked herself a score of questions in the second of time Miss Hardy paused at the door, but the latter passed by her without saying a word. The fact was that Miss Hardy hardly knew what to say; but Sally received no cautions such as usually beset her. But when at last Sally tiptoed out to feed the chickens—a duty she always had to be reminded of—Miss Hardy actually smiled on her when she returned, and asked bluntly if she would like to go down to Gamble's the next day, adding an awkward hint about a certain red fascinator which Sally had coveted.

No wonder that Sally felt as if she must shout—and she did, making the calf nosing about the chickens' feeding-ground an excuse for her outbreak.

Tom's head greeted her reappearance.

"Did you catch it?" he asked, with interest.

"Catch it? I guess so—at least, I guess I'm going to."

But her demeanor did not correspond with Tom's idea of "catching it," and he could not forget her "slyness."

"You deserve to," he observed, somewhat sulkily; and Sally went back to the house, hoping that Miss Hardy thought she did.

The next day brought the fascinator, and while Sally revelled in its beauties, Miss Hardy found means to inquire about the valentine.

"It was only twenty cents, ma'am," the clerk explained in an aside. "I'd've given her t'other one if I'd known it was for you."

But Miss Hardy did not care for that part of it. She had learned, too, about the search among the comic ones, and she drew her own conclusions.

"And now you are satisfied?" she questioned, smiling furtively that evening at Sally, who was before the glass for the hundredth time, she knew.

"O, Miss Hardy, I be for sure!" and Sally emphasized it by daringly throwing her arms around Miss Hardy's neck and giving her a resounding kiss. "I wouldn't've thought I could."

"Nor I," answered Miss Hardy, rather enigmatically, as she wiped her lips from force of habit, and then actually kissed Sally again. "Anyway, I find I can, and I must say, it seems a more human-like living."

Sally found it so. The only drawback to her happiness was that she had not seen the valentine since—the valentine that she was sure had made all the change. Miss Hardy kept it in her bureau. But one day, months after, when Sally was looked upon by Miss Hardy as her own, it accidentally turned up when she was sent to search for something. She took it up with a smile at the remembrance. For the first time she stopped to read the lines she had failed to notice the day of its purchase. Sally was wiser on the subject of valentines, and she saw that in truth this was one, for beneath the cupid and in the rose wreath were lines which, though crude, were expressive of the want of every human heart:

"You may give me to eat  
Of the choicest meat,  
And to drink of the richest wine;  
Yet I hunger still—  
And ever will,  
For love—and that love is thine."

"If I don't believe in the saint, I do believe in the valentine," said Miss Hardy, softly, over her shoulder.—Sarah Bierce Scarborough.

Theolo—Don't you think there will be any punishment hereafter for a man who commits bigamy?

Diablo—Of course I do. Both his wives will be there at the same time.—Brooklyn Life.

### Gems of Thought.

Every one has a fair turn to be as great as he pleases.—Jeremy Collier.

Talents are nurtured best in solitude, but character on life's tempestuous sea.—Goethe.

Not only is he idle who is doing nothing, but he that might be better employed.—Socrates.

The happiness of your life depends upon the character of your thoughts.—Marcus Antoninus.

If there be any truer measure of a man than by what he does, it must be by what he gives.—South.

The great thing in observation is not to be influenced by our preconceived notions, or what we want to be true, or by our fears, hopes or any personal element, and to see the thing just as it is.—John Burroughs.

Suppose the reverse of virtue were solemnly enacted, and the practice of fraud and rapine and perjury and falseness to a man's word and all vice were established by law, would that which we now call vice gain the reputation of virtue, and that which we now call virtue grow odious to human nature?—Tillotson.

Like Alpine climbers, our only safety is in steadfastly fixing our gaze on him, our Guide, and following step by step the path he trod, that he might know all the dangers and difficulties that beset our way. And we may be sure he will never lead us further or faster than we can safely follow.—Rose Porter.

I think I have the mother feeling—ideally, at least; a woman is not a woman quite who lacks it, be she married or single. The children—God bless them!—belong to the mother heart that beats in all true women. They seem even dearer, sometimes, because I have none of my own to love and be loved by, for there is great emptiness that only child love can fill.—Lucy Larcom.

When modesty ceases to be the chief ornament of one sex, and integrity of the other, society is upon a wrong basis, and we shall be ever after without rules to guide our judgment in what is really becoming and ornamental. Nature and reason direct one thing, passion and humor another. To follow the dictates of these two latter is going into a road that is both endless and intricate; when we pursue the other, our passage is delightful, and what we aim at easily attainable.—Sir R. Steele.

### Fashion Notes.

The newest velvet ribbons have a jetted edge, making them very effective for hat as well as dress trimmings.

Simple waists are always useful. One which the most unsophisticated home dress-maker can manage with success is made of some of the pretty short silks, and another is trimmed with embroidered mull, arranged at the neck in the form of a yoke with two points in front.

A zouave effect made of the same embroidery is a very becoming and pretty addition to a plain waist; and then there are the lace yokes and collars with a frill on the edge, which may be taken off at will, and thus make a plain waist do double duty. Shirring the sleeves in a little way above the elbow to form the second puff gives a little style to a simple waist.

A blouse for a young girl is of glaze silk of beige and rose. Plaits of rose-colored crepe ornament the blouse, being inserted in slashes of the silk, each group of plaits headed by chou. A draped ceinture fastens behind under a chou. The crush around the throat is of the rose crepe.

Soft silks are to be in favor for spring and summer wear, but just at present all the heavier varieties, such as brocades, stiff satins and glaze silks, are most worn. The new India silks are brocaded in small patterns, and plain silks woven so thin that they are almost like gauze are one of the novelties which can be accordion plaited as effectively as chiffon.

### A Bright Boy.

I knew a boy—a scrap of a lad—who almost needed a high chair to bring him up to the general level of the dining-table, who liked to read the encyclopedia. He was always hunting round in the big books of the encyclopedia—books about his own size—for what he wanted to know. He dug in it as another boy would dig in the woods for sassafras root. It appeared that he was interested in natural history and natural phenomena. He asked questions of these books exactly as he would ask a living authority, and kept at it till he got answers. He knew how to read. Soon that boy was an authority on earthquakes. He liked to have the conversation at table turn on earthquakes, for then he seemed to be the tallest person at the table. I suppose there was no earthquake anywhere of any importance but that he could tell where it occurred, and what damage it did, how many houses it buried, and how many people it killed, and what shape it left the country it had shaken. From that he went on to try to discover what caused these disturbances; and this led him into other investigations, and at last into the study of electricity, practically as well as theoretically. He examined machines and invented machines, and kept on reading, and presently he was an expert in electricity. He knew how to put in wires and signals and bells and to do a number of practical and useful things; and almost before he was able to enter the high school he had a great deal of work to do in the city, and three or four men under him. These men under him had not read as much about electricity as he had.—Charles Dudley Warner.

### Smiles.

A Dakota court is struggling with a prisoner named Szczyz. We don't know what he is charged with; but, from his name, we suspect it is soda-water.—Chicago Dispatch.

"If my employer does not retract what he said to me this morning, I shall leave his store." "Why, what did he say?" "He told me to look for another place."—Harlem Life.

A lady had been looking for a friend for a long time without success. Finally, she came upon her in an unexpected place. "Well," she exclaimed, "I've been on a perfect wild-goose chase all day long; but, thank goodness, I've found you at last."

Mrs. Penfield—"My husband has found a way by which he says I am of the greatest help to him in his literary work." Mrs. Hillaire—"How nice that must be for you, my dear! But how are you able to do it?" "As soon as I see him at his desk I go into another room and keep perfectly quiet until he has finished."—Puck.

McSwatters—It's very funny.

Mrs. McSwatters—What is?

McSwatters—Why, when the doctor treats me I always have to pay for it.—Syracuse Post.

Duffy—That's a pretty bright dog of yours, Jawkins.

Jawkins—Why, yes; I believe that if he only knew how to talk he'd be smart enough to keep his mouth shut.—Harper's Bazar.

"And now what is it?" asked the sage, as the young man timidly approached. "Pray tell me," asked the youth, "does a woman marry a man because of her confidence in the man, or because of her confidence in her ability to manage him?" For once the sage had to take the question under advisement.—Indianapolis Journal.

## DOMESTIC ECONOMY.

### Hints to Housekeepers.

Always appear at table with smooth hair and neat apparel.

Bread should never be hurried; give plenty of time both in rising and baking.

Drive ants out of your cupboards by sprinkling pulverized borax on the shelves.

To remove ink stains from the hands rub the spots with the wet head of a common parlor match.

Cake, after it becomes stale, makes excellent steamed pudding, eaten with a sauce of sweet gravy.

Use soapy water when making starch. The clothes will have a glossier appearance, and the irons be less likely to stick.

Tidies made of antique lace can be washed satisfactorily if soaked in borax water; then let them lie in warm suds, squeezing them with your hands; rinse, but do not blue them. Instead of ironing them, pull them in shape, and pin them to a clean cloth on your ironing board; pick out each little point and pin it down. Let them get perfectly dry before removing them.

When you buttonhole scallops in your embroidery, says an expert needle woman, hold the concave edge towards you, and instead of knotting your thread, which may cause trouble later, take a few running stitches to start the thread. Always put through the eye of the needle first the end of the thread which comes off the spool, and the thread will be less apt to knot and snarl.

If any part of the body is heated more than the rest by overdressing it or any other cause, says a medical writer, an undue flow of blood sets in toward that part, often resulting in chronic inflammation. I once knew of a fatal case of kidney disease developed by working at a desk with the back near a heated stove. Similar effects are produced by having one part of the body more warmly clothed than the rest. Many a sore throat arises from the tippet worn by children, harm resulting both from overheating the throat when on and from the sudden cooling when it is taken off.

POOR MAN'S PUDDING.—Two quarts of new milk, four tablespoonfuls of whole rice, four tablespoonfuls of sugar and one of cinnamon. Bake two hours. Stir carefully a few times when it is first put in the oven.

STEWED CABBAGE.—Cut up a cabbage as for cold slaw. Boil in water twenty minutes; then drain thoroughly and barely cover with rich milk. Cover close and boil till tender, which will not require many minutes. Add a palatable seasoning of butter, pepper and salt, and when ready to serve add the yolk of a beaten egg mixed with a few spoonfuls of rich cream.

FRUIT CANDY.—Take one cocoanut and one and one-half pounds of granulated sugar. Wet the sugar with the milk of the cocoanut, put it in a saucepan, let it heat slowly, then boil rapidly for five minutes. Add the cocoanut, grated finely; boil for ten minutes, stirring constantly. Try it on a cold plate; if it forms a firm paste when cold take it from the fire. Pour part of it out on a large tin lined with buttered paper. To the remaining cream add one-fourth of a pound of raisins, stoned and chopped, one-half pound of blanched almonds, one pint of pecans, one-half cupful of chopped walnuts. Beat all well together, then pour it over the other in the tin, and when cold cut it in bars or squares.

Highest of all in Leavening Power.—Latest U. S. Gov't Report

**Royal Baking Powder**  
ABSOLUTELY PURE



## Coast Industrial Notes.

The city savings banks hold deposits aggregating \$100,000,000.

A earload of salmon is being daily sent East from Gray's Harbor, Wash.

Watsonville, Santa Cruz Co., has shipped two earloads of apples to England.

A second shipment of a cargo of 600,000 feet of lumber to Hawaii has been made from Port Angeles for the Honolulu Railroad.

Columbia river fishermen will hereafter have to pay an annual license of from \$2.50 to \$200, according to the manner of catching fish.

An electric line between Tacoma and Seattle is projected. Between the railroad and Sound steamers the new line will hardly prove remunerative.

The Canadian Pacific earnings for the week ending February 7th, were \$331,000 against \$384,000 for the corresponding period last year, being a decrease of \$53,000.

A company has been organized in this city, with \$1,000,000 capital stock, with a view to full representation of California manufactures at the coming exposition in the City of Mexico.

"The lumber market is booming. Sugar pine is now worth about \$60 a thousand and is still on the rise. Other classes of lumber have gone up, too," says the Dunsuir News.

The Southern California Railway Co., which some years ago changed from wood to coal, has about completed arrangements for locomotive steam making by burning crude petroleum.

It is estimated by hotel and railroad men that there are 20,000 visitors already in southern California, and that the present severity of Eastern weather will nearly if not quite double that number.

One hundred thousand negroes will leave Alabama, Georgia and Louisiana for northern Mexico in the next few months. A colony has been founded under the auspices of the Mexican Government.

The annual Fiesta or Carnival at Los Angeles, Cal., will take place this year from the 15th to the 20th of April, comparing in splendor and interest with the Carnival of Rome or the New Orleans Mardi Gras.

The San Francisco owners of the big Port Discovery, Wash., mill, whose machinery has been idle for several years, have arranged for the outlay of \$100,000 in improvements and working capital, and the mill will soon be operated at its full capacity of 300,000 feet daily.

Surveyor-General W. S. Green calls for bids for the resurvey of three southern California forest reserves—173 miles to establish the lines of the San Bernardino forest reserve, 154 miles for the San Gabriel and forty miles for the Trabuco Canyon reserve—according to executive proclamation.

San Francisco is soon to inaugurate an industry that has hitherto been confined in this country to New York City—that of whalebone cutting. While much of the world's supply of whalebone is landed here from the whaling ships, it has hitherto all been sent to New York and London to be cut for use.

Evidence of the extent to which our wheat trade with Germany has suffered by the competition of the Argentine Republic is contained in a report to the State Department by Frank H. Mason, United States consul-general at Frankfurt, upon the German wheat imports for the past three years. In 1892 the United States shipped to Germany 6,302,130 tons of wheat. The next year this dropped to 3,149,282 tons, and in 1894 the imports were but 3,054,663 tons. Meanwhile Argentine seemed to have gained about what we lost of this trade, for the imports of wheat from that country into Germany, amounting in 1892 to but 661,607 tons, had swelled in 1893 to 1,513,961 tons and in 1894 to 3,196,190 tons.

W. F. de Land, who is connected with the Lower California Pearl Fishing Company, reports that the past season has been quite successful. The company has a number of schooners and forty launches, each of the latter being equipped with machinery and diving apparatus. About 600 men are employed by the company, and they fish for 1000 miles along the border line of Guatemala, around the coast of Oaxaca and Guerrero, and up to the mouth of the Colorado river in the Gulf of California. Quite a number of pearls were found this year, some of them being very large. One weighed 17 carats, another 15, another 12 and still another 10. The pearls are white, black, and different shades of green and blue—the green and blue pearls being found in no other fisheries in the world, and they are very valuable.

## Exterminating Squirrels.

No poisonous compounds used; sure death, and failure is unknown; material used costs nothing. Information free.

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16 & 18 DRUMS! S.F.

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Having sold my business, known as Napa Valley Nurseries, I respectfully solicit for my successors a continuance of the patronage with which I have been so generously favored for the past 18 years.  
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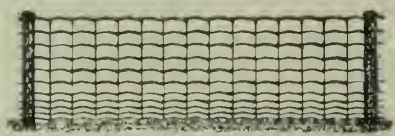
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WINTERS, CAL., Oct. 18, 1894.

SACRAMENTO, Sept. 5, 1894.

Mr. J. T. Bogue, Tudor, Cal.—"In answer to your inquiry regarding the California Red Plum, we wish to state that from experience we have had with this Plum in the Eastern markets, the net results show that it is a very valuable Plum and we take pleasure in recommending same, believing that it is one of the best shipping and selling Plums that has ever been discovered for California shippers." Yours truly, PORTER BROTHERS COMPANY, per NATE R. SALSIBURY, Vice-Pres.

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TUDOR, SUTTER COUNTY, CAL.

INCORPORATED 1884.

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Fruit Trees, Nut Trees, Small Fruits, Ornamental Trees and Shrubs, Palms, Flowering Plants, Etc.

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### FRUIT TREES.

Large and Complete Stock of Fruit and Ornamental Trees and Plants, at prices to suit the times.

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GRASS, CLOVER, VEGETABLE, FLOWER AND TREE SEEDS, ETC.  
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To close out a special lot of three-year buds of Med. Sweets (five-year roots), finely branched, 4x6 feet, we offer them at \$25 the hundred.

Write us if you want Med. Sweets or Wash. Navels; we can give you lower prices for good trees than any one.

Cal. Fan and Cham. Excelsa Palms, Laurustinus, Dracaena Indivisa, Roses, Tuberoses, Etc., Etc.

Agents wanted in every town in Northern and Central California where we are not represented.

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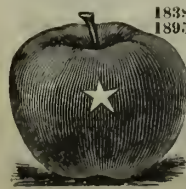
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Start, the largest early apple, 12 in. around, marketable 1st week in July; Paragon, Pashin and others. Koonce Pear, early, handsome and delicious. Lincoln Coreless, very large and very late; Seteen, Japan Golden Russet, Vt. Beauty, &c. Japan Quince Columbia unequalled for jelly. Nuts—Parry's Giant, 6 in. around, the largest known chestnut; Paragon, Numb and many others. Walnuts—French, Persian, Japan, English and Am., Pecans, Almonds and Filberts, Elenkus Longipes, Japan Mayberries, Hardy Oranges; Dwarf Rocky Mt. Cherries, free from insects, black knots and other diseases; Small Fruits, Grapes, Currants, &c.; Shade Trees, Ornamental Shrubs, &c. CATALOGUE FREE. POMONA NURSERIES, - - - - - W.M. PARRY, Parry, N. J.



### The Age of the Earth.

Scientists have differed greatly among themselves as to the probable length of time which the earth has taken to get into its present condition. Professor Guthrie Tait, having in view the rate at which the sun is supposed to be cooling, concludes that only about 10,000 years can be allowed to the earth since it was capable of retaining water on its surface in a liquid state. That, however, would presuppose a considerably longer period anterior to the other, when the globe was much hotter. Newcomb was disposed to fix the outside limit of the age of the whole solar system at 20,000,000. Clarence King computed, from experiments on volcanic rocks, that the whole duration of our globe had not exceeded 24,000,000. George Darwin figures out the interval that has elapsed since the molten mass composing the earth threw off the moon at 57,000,000. His calculations start with the influence of tidal friction in retarding the earth's rotation. Few estimates, however, have received quite the same respect from scientific men without a special theory of their own as Lord Kelvin's. Judging by the present temperature gradient in the earth's crust, as one goes downward, he thought that the whole mass could hardly have taken more than 100,000,000 years to cool.

Geologists, however, while not agreeing among themselves, have been disposed to demand still more time. Houghton made 200,000,000 his minimum; Sir Archibald Geikie's maximum is 630,000,000. In view of the very slow rate at which animal and vegetable species change, in the progress of evolution, biologists have favored the longer rather than the shorter periods here indicated; so that Lord Kelvin and some of his adherents have taken issue with those authorities as claiming altogether too much.

Such is this distinguished physicist's standing in the scientific world to-day that it has for years been considered rather audacious to question his conclusions on any point whatever. Nevertheless, within a few weeks, Professor John Perry, who occupies the chair of mechanical engineering and applied mathematics at Finsbury Technical College has made public his reasons for greatly extending our estimate of the earth's age. Like Kelvin, he assumes a sphere with a smooth surface, and a uniform heat of 7000 degrees Fahr. Taking it for granted, also, that the conductivity of the interior portion is the same as that of the crust, Perry gets the same answer as Kelvin, namely, about 100,000,000. But on the hypothesis that the internal mass had a higher rate of conductivity than the outer shell, this latest dissenter declares that a much longer time would be needed to bring the earth to its present state. On the basis of ten times greater conductivity within than without, Perry figures out a result fifty-six times as great as Kelvin's, while he regards it easily imaginable that 290 times as many years may have been necessary. Some excuse for supposing the inner materials of the globe to be the best conductors is found in works of Dr. Robert Weber and Professor Joseph David Everett, well-known authorities on temperatures at various depths in the earth's crust. These experts are quoted by Perry to show that certain rocks greatly increase in conductivity with increase of temperature. This, with schists and micaceous gneiss, averages about 75 per cent for every 100 degrees centigrade; and at that rate Perry gets for an even earth perfectly solid at the start (to say nothing of a previous liquid or gaseous state), a result 1300 times as great as Kelvin.

**Beware of Ointments for Catarrh that contain Mercury.**

As mercury will surely destroy the sense of smell and completely derange the whole system when entering it through the mucous surface. Such articles should never be used except on prescriptions from reputable physicians, as the damage they will do is tenfold to the good you can possibly derive from them. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, O., contains no mercury, and is taken internally, acting directly upon the blood and mucous surfaces of the system. In buying Hall's Catarrh Cure be sure you get the genuine. It is taken internally, and made in Toledo, Ohio, by F. J. Cheney & Co. Testimonials free. Sold by Druggists; price, 75c. per bottle.

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Sore Throat and Diphtheria have for over 50 years yielded to

## Pain Killer

and they always will.

Scalds, Sprains, Bruises, Burns and Cuts are also promptly cured by its use. Popular for 50 years—most popular to-day. Made only by Perry Davis & Son, Providence, R. I.

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FARM COVERED WITH STUMPS.



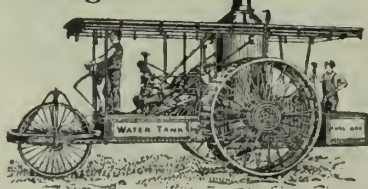
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Works on either Standing Timber or Stumps. Pulls an ordinary grub in one and a half minutes. Makes a clean sweep of two acres at a sitting. A man, a boy and a horse can operate it. No heavy chains or rods to handle. The crop on a few acres the first year will pay for the machine. You can not longer afford to pay taxes on unproductive timber land. Clear it, raise a beautiful crop with less labor and recuperate your old worn out land by pasturing. It will only cost you a postal card to send for an illustrated Catalogue, giving price, terms and testimonials. Also full information concerning our L. X. J. Grubber, Iron Giant Grub and Stump Machine, Two Horse Hawkeye and other appliances for clearing timber and land. Address

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Made in 250 Styles.  
For either road or stable use.  
All shapes, sizes and qualities.  
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We have one of these engines that was used about one month last season and was taken back by us by reason of illness of purchaser. Engine is in perfect order, and in better working order than when first sent from the factory. A BARGAIN. Indicated power, 80-horse; Cylinders, 8x8; Wheels, 8 ft. high, 28 in. wide; weight, less than 10 tons. Price when new, \$4500.

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Entirely of Steel. No castings to break. Strongest and simplest Lever Arrangement on the market. Write for descriptive Circular. **RODERICK LEAN MFG. CO.**  
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## A GOOD SEPARATOR and GOOD BUTTER

Will make any man rich who attends to business.

## The Sharples Russian Separator

Makes a smooth solid cream, free from froth, and of better quality than any other separator has ever made. The froth on separator cream is bitter and will deteriorate the quality of butter. In our machine the cream leaves the bowl very near the axis of revolution and strikes a slanting surface, so that it is not frothed.

## The Bowl Alone Revolves.

There are comparatively no spare parts to renew, no complicated machinery to care for. During the present winter a large number of separators have exploded, but never one of the Sharples machines. No operator has ever been hurt by one of our machines: no one of our machines has ever exploded. Our machinery is well built and will last a lifetime.

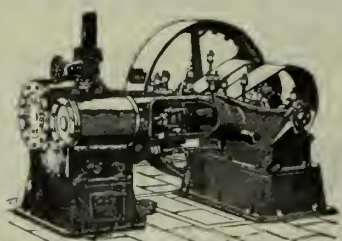
## The Russian Babcock Test

Is a good deal better than any other test ever offered to the public. It is as substantial as a separator, and is the kind of machine that first-class establishments use. The Illinois and Anglo-Swiss Condensed Milk Companies use it. So do John Newman Co., the St. Louis Dairy Co., W. W. Sherwin, and other creamerymen who will have only the best in their factories. Send for circulars and please mention this paper.

## Baker & Hamilton,

Sole Pacific Coast Agents,

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**AIR PUMP**

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**BOILER FEED PUMP**

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## COMPOUND ENGINE

With only one valve and GREATEST ECONOMY OF FUEL.  
Cheaper than Single Engine of same horse power.

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Write for Catalogue No. 15.

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## Protect Your Trees

—WITH—

### Gilman's Patent Tule Tree Protector.

PATENTED AUGUST 1, 1893.



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FIRST PRIZE—Medal and Diploma—California Mid-Winter International Exposition.

Cheapest, best and only one to protect trees and vines from frost, sunburn, rabbits, squirrels, borers and other tree pests.

For testimonials from parties who are using them, send for descriptive circulars.

**B. F. GILMAN,**

Sole Manufacturer of Patent Tule Covers.

420 Ninth Street, San Francisco, Cal.

## While The Sun Shines

The man who plants for profit must work while the sun shines. Waste time means money lost. He must have tools that will do the work quick and do it right. The **PLANET JR. Labor-Saving Farm Tools** are modern essentials to successful competition. They are money savers, labor savers, time savers. They make it possible for a man to do a half a dozen things in the time it used to take to do one. You can see their pictures, learn their uses, satisfy yourself as to their merits, by getting the **Planet Jr. book** for 1895, which we send **Free**.

S. L. ALLEN & CO., Philadelphia.



## S. F. MARKET REPORT.

## Market Review.

SAN FRANCISCO, Feb. 27, 1895.

**FLOUR**—We quote: Net cash prices for Family Extras, \$3 25@3 35 bbl; Bakers' Extras, \$3 15@3 25; Superfine, \$2 10@2 40 bbl.

**WHEAT**—Trade has been moving along slowly for a week past without any marked fluctuations in prices. The demand for shipping purposes is fair, without being particularly positive, and about all offerings of desirable character find ready custom. Prices yesterday were a little steadier, while the general outlook of the situation seemed more favorable for the selling interest. In speculative circles there is considerable activity, with prices in futures tending upward. No. 1 shipping wheat is quotable at 82½¢ ctt, with 83½¢ and possibly 85¢ for choice lots. Milling grades are steady at 87½¢@92½¢ ctt. Walla Walla Wheat is not in heavy supply and prices are stronger, being quotable at 78½¢@81½¢ for fair average quality, 81½¢@85¢ for bluestem and 72½¢@75¢ for damp.

**BARLEY**—Ordinary feed descriptions show no special strength in price, transactions being few and of limited proportions. Brewing qualities are somewhat steadily held, though there is no business of any magnitude in progress. We quote: Feed, fair to good, 72½¢@73½¢; choice, 75¢; Brewing, 85¢@90¢ ctt.

**OATS**—The market presents no particular activity. Of course, there is more or less call every day to satisfy current wants, but there is no desire to stock up much ahead. Consequently, the volume of business is not very great. Black Oats have been lowered within a few days, but no other changes in prices have occurred. We quote as follows: Milling, \$1 02½@1 05; Surprise, \$1 05@1 15; fancy feed, \$1 01½; good to choice, 95¢@1; fair to good, 90¢@95¢; poor to fair, 82½¢@87½¢; Black, \$1 10@1 25; Red, \$1 05@1 17½; Gray, 92½@97½¢ ctt.

**CORN**—Offerings are moderately free, but there is not much business doing. We quote: Large Yellow, \$1 20@1 22½; small Yellow, \$1 25@1 27½; White, \$1 20@1 22½¢ ctt.

**HAY**—Receipts are rather in excess of current needs, and the tone of the market is easier. Wire-bound Hay sells at \$1 10 per ton less than rope-bound Hay. Following are the wholesale city prices for rope-bound Hay: Wheat, \$8@11 50; Wheat and Oat, \$8@11; Oat, \$9@11; Alfalfa, \$8@9 50; Barley, \$8@10; Clover, \$8 50@9 50; compressed, \$8 50@10 50; Stock, \$6@7 per ton.

**STRAW**—Quotable at 70¢@80¢ bale.

**MIDDINGS**—Quotable at \$18@19 per ton.

**BRAN**—Quotable at \$12@13 50 per ton.

**RYE**—Quotable at 85¢@90¢ ctt.

**FEED**—Manhattan Horse Food (Red Ball Brand) in 100-lb cabinets, \$8; Manhattan Egg Food, 100-lb bags, \$11 50.

**BEANS**—The steady feeling noted of late in White descriptions has become so pronounced as to cause a small advance in prices, with fairly active demand. Colored kinds are more or less neglected, with prices easy. We quote as follows: Bayos, \$1 75@1 90; Butter, \$1 75@1 80 for small and \$2 25 for large; Pink, \$1 10@1 35; Red, \$1 60@1 65; Lima, \$4 10@4 25; Pea, \$2 25@2 75; Small White, \$2 25@2 75; Large White, \$2 10@2 50; Blackeye, \$2 75@3; Red Kidney, \$2 75@3; Horse, \$1 60@1 70 ctt.

**DRIED PEAS**—We quote: Green, \$1 50@1 60; Niles, \$1 60@1 30 ctt.

**SEEDS**—There is not much doing in this line just now. We quote as follows: Mustard, Brown, \$1 50@1 75; Yellow, \$2@2 25; Trislee, \$1 75@2 15; Canary, 30¢@40¢; Hemp, 30¢@34¢; Rape, 1½¢@24¢; Timothy, 5½¢@6½¢; Alfalfa, 7½¢@8¢ lb; Flax, \$2@2 50 ctt.

**POTATOES**—The market is crowded with offerings, and prices favor consumers. We quote as follows: New Potatoes, 1½¢@2¢ lb; Early Rose, 40¢@55¢; River Reds, 20¢@30¢; Burbanks, 30¢@45¢; Oregon Burbanks, 40¢@55¢; Sallans Burbanks, 75¢@81¢; Sweet, 50¢@75¢ for Rivers and \$1 25@1 50 ctt for choice stock.

**ONIONS**—Stocks are very large, though consisting mostly of inferior stock. Quotations show a wide range. Some lots can be bought at 25¢@50¢ sack, while good to choice parcels bring 85¢@1 05 ctt, with an occasional sale of a fancy article at a trifle more.

**VARIOUS**—Asparagus weakened again yesterday morning under receipt of 76 boxes. Other arrivals included 9 boxes Rhubarb and 6 sacks Green Peas. Neither Tomatoes nor String Beans have been seen for a week. Cabbage keeps steady, being wanted for shipping purposes. We quote as follows: Hothouse Cucumbers, 50¢@81¢ dozen; Asparagus, 7@15¢ lb; Rhubarb, 6@8¢ lb; Green Peas, 4@6¢ lb; Green Peppers, 3@4¢ lb; Turnips, 50¢ ctt; Beets, 60¢@75¢ sack; Carrots, 30¢@50¢; Cabbage, 50¢@60¢ ctt; Garlic, 3@3½¢ lb; Cauliflower, 30¢@40¢ dozen; Dried Peppers, 12½¢@15¢ lb; Dried Okra, 12½¢ lb.

**FRESH FRUIT**—Supplies of Apples are large, with fair demand. We quote: Apples, 40¢@1 per box, with \$1 25 for fancy.

**CITRUS FRUIT**—The market is comfortably stocked with Oranges, movement being only moderate. Mexican Limes are firmer, offerings being small. Fresh consignments are expected by the Panama steamer to arrive to-day. We quote as follows: California Navels, \$1 25@2 25; Seedlings, 75¢@1 50 box; Mexican Limes, \$7@7 50 box; California Limes, in small boxes, 50¢@75¢ box; Lemons, Sicily, \$3@4; California Lemons, 75¢@1 25 for common and \$1 50@2 50 for good to choice.

**DRIED FRUIT**—Trade flows along in steady, though quiet, fashion. The demand is mostly for the poorer quality because it is cheap. Peaches and loose Raisins are said to be in more request at the moment than anything else.

Following are the prices furnished by the Fruit Exchange. The figures presented represent carload lots, small parcels occasionally selling at slightly lower rates:

Apples—Fancy Moorpark, 8½¢; choice, do, 8¢; fancy, 7½¢; choice, 7¢; standard, 6½¢; prime, 6¢. Apples—Evaporated, 5½¢@70¢; sun-dried, 4@5¢. Peaches—Fancy, 7¢; choice, 6½¢; standard, 5½¢; prime, 5¢; peeled, in boxes, 12@13¢. Pears—Fancy, halves, 5½¢; quarters, 4½¢; choice, 4½¢; standard, 3½¢; prime, 3¢. Plums—Pitted, 4@5¢; unpitted, 1½¢@2¢. Prunes—Four sizes, 4½¢@4½¢. Nectarines—Fancy, 7¢; choice, 6½¢; standard, 6¢; prime, 5½¢. Figs—White, choice, 5@5½¢; Black, choice, 1½¢@2¢.

Raisins—In sacks (50-lb boxes selling at ¼¢ lb. higher): 4-crown, loose, 4¢; 3-crown, 2¢; 2-crown, 2¢; seedless Sultanias, 3¢; seedless Muscates, 2¢ lb; 3-crown London Layers, \$1 25 box in 20-lb boxes; clusters, \$1 50; Dehesa clusters, \$2; Imperial clusters, \$3; 4-crown, loose, \$1 15; 4-crown, loose, faced, \$1 25 box.

Dried Grapes—1½¢ lb.

NUTS—Quiet jobbing trade. Prices keep easy. We quote: Chestnuts, 7@8¢; Walnuts,

5@7¢ for hard shell, 7@9¢ for soft shell and 7@9¢ for paper shell; California Almonds, 5@7½¢ for soft shell, 3@4¢ for hard shell and 8@9¢ for paper shell; Peanuts, 4@6¢; Hickory Nuts, 5@6¢; Filberts, 8@9¢; Pecans, 6¢ for rough and 8¢ for polished; Brazil Nuts, 7@7½¢ lb; Coconuts, \$5@5 50 lb 100.

**HONEY**—A cargo of Comb was recently sent to Chicago. Local trade is light and slow. Stocks not large. We quote: Comb, 10¢@12¢; water white extracted, 7¢; light amber extracted, 5½¢@6¢; dark amber, 5@5½¢ lb.

**BEE SWAX**—Quotable at 25¢@27¢ lb.

**BUTTER**—The market is heavy, only fancy stock bringing full figures. We quote as follows: Creamery—Fancy, 17@18¢; seconds, 16@17¢; imitation, 15@16¢. Dairy—Fancy, 14@15¢; good to choice, 12½¢@13½¢; fair, 10¢@12¢; store lots, 8@9¢.

**CHEESE**—The various depots are well filled, with prices rather easy. Choice to fancy, 8@9¢; fair to good, 6@7¢; Eastern, ordinary to fine, 11@14¢ lb.

**EGGS**—In spite of the shipment of four or five carloads to Eastern centers, the local market still shows weak tone and the situation continues to incline in favor of consumers. We quote: California Ranch, 13@14¢; store lots, 11@12½¢ dozen.

**POULTRY**—Quotations for dressed Turkeys are nominal, scarcely any having been received for two days. We quote: Live Turkeys—Gobblers, 8@10¢; Hens, 8@10¢ lb; dressed Turkeys, 10@13¢ lb; Roosters, \$3@3 50 for old, and \$5 50@6 50 for young; Broilers, \$3@4 for small and \$4 50@5 for large; Fryers, \$5@6; Hens, \$3 50@4 50; Ducks, \$5@6 50; Geese, \$1 50@1 75 pair; Pigeons, \$2@2 25 for old and \$2 50 lb dozen for young.

**CURED MEATS**—There is ample supply of the several kinds. We quote: Eastern Sugar-cured Hams, 10½¢@11¢ lb; California Hams, 9½¢@10¢; Bacon, Eastern, extra light, sugar-cured, 13¢; medium, 8@8½¢; do, light, 9@10¢; extra light, 11@12¢ lb; Pork, extra clear, bbls, \$17 50@18 50; half bbls, \$8 50@9 50; Pig Pork, bbls, \$20@21; hf bbls, \$10@11; Pigs' Feet, hf bbls, \$4 50; dry salted Pork, 8½¢@9¢ lb; Beef, mess, bbls, \$7@7 50; do, extra mess, bbls, \$8@8 50; do, family, \$10; extra, do, \$10 50@11¢ bbl; do, smoked, 9@10¢; Pickled Tongues, hf bbls, \$7.

**WOOL**—Quotations are nominal, there being no trade of consequence. Grease stock is pretty well cleaned up. We quote Fall:

Free Northern..... 7 @ 8½  
Northern, defective..... 5 @ 7  
Southern & San Joaquin, light and free. 5 @ 6  
Do, defective..... 3 @ 4

**HOPS**—Business very slow. The little movement in progress is said to be on consignment. Quotable at 4@8¢ lb, as to quality.

## FRANK A. BRUSH,

SANTA ROSA, CAL. (Care Santa Rosa National Bank.) Importer, Breeder, Exporter.

**S. C. White Leghorns,**  
**S. C. Brown Leghorns,**  
**Barred Plymouth Rocks,**  
**Black Minorcas.**

Eggs, \$3 per 13. Send for Circular.

## Short-Horn Bulls

OF MILKING STRAINS.

CALVES, YEARLINGS AND TWO-YEAR-OLDS.

## ROBERT ASHBURNER,

Baden Station, San Mateo Co., Cal.

The cars of the S. F. and San Mateo Electric Road pass the place.

## Five Bulls For Sale.

## SHORT-HORNS.

Good ones; come and see them and you will buy them. Three 16 months old, two over two years old. All sired by the celebrated bull Baron Butterfly; all thoroughbred, and contain good show timber. One of the two-year-olds won First Prize at State Fair in Sacramento, 1893, as a calf. Some of them are of the best milking families. I also have JACKS and JENNETS for sale, pure Mammoth French stock. Intending purchasers met at train, per agreement by letter. Address E. S. DRIVER, Antelope, Sac. Co., Cal. Antelope is on the Overland R. R., 14 miles north of Sac. City.

## 6 YOUNG SHORT-HORN BULLS 6 FOR SALE.

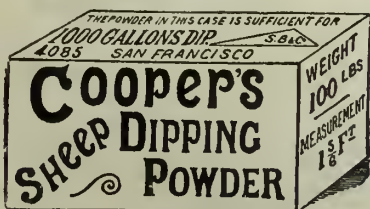
From good milking strains; are eligible to record. I will make low prices to close them out.

Also fine young BERKSHIRE AND POLAND-CHINA SOWS, from imported stock.

P. H. MURPHY,  
PERKINS, SACRAMENTO COUNTY, CAL.

## Jacks and Jennets,

RAISED FROM IMPORTED STOCK, for sale by V. GIANELLA, Honey, Butte county, Cal.



## SURE CURE FOR SCAB.

PRICE, \$16 PER CASE.

Sole Agents,

SHOOBET, BEALE &amp; CO.,

418 California St., San Francisco, Cal.

## EGG RECIPE.

Take one postal card, write on its back, "How can I make larger profits on the egg crop?" Direct it to H. K. STARKWEATHER, 310 California St., San Francisco. Drop in postoffice and await prompt answer.

## Breeders' Directory.

Six lines or less in this directory at 50¢ per line per month.

## Horses and Cattle.

F. H. BURKE, 626 Market St., S. F. All Prize Horses; Grade Milch Cows. Fine Pigs.

**BULLS**—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

**FRESH JERSEY HEIFERS** for sale. Sulphur Spring Farm, Niles, Cal.

**JERSEYS**—The best A. J. C. C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale.

P. H. MURPHY, Perkins, Sac. Co., Cal. Breeder of Shorthorn Cattle, Poland-China & Berkshire Hogs.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

PETER SAXE & SON, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

**JERSEYS AND HOLSTEINS**, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. William Niles & Co., Los Angeles, Cal. Breeders and Exporters. Established in 1876.

## Poultry.

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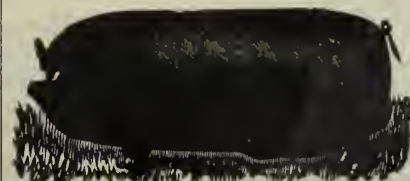
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## Patrons of Husbandry.

### Tulare Grange.

TULARE, Feb. 18, 1895.

Tulare Grange, No. 198, Patrons of Husbandry, held its regular meeting in Goldman's hall on Saturday afternoon.

After routine business was disposed of, Worthy Master Shoemaker imparted the annual word and gave account of his visits to different granges in the northern and central parts of the State, and of grange work.

For the purpose of inspection the State is now divided into four districts, with an inspector for each district, Mr. Shoemaker being inspector for the northern district and W. W. Green inspector for this district.

The committees on revision and amendment of the County Government and Irrigation laws made verbal reports and were discharged.

The lecturer announced his intention of calling at each meeting of the grange upon some brother or sister for a paper upon some subject of interest to agriculture, to be read at the next grange meeting. Julius Forrer will at the next grange meeting read a paper on Australian salt bush, the character of soil it is grown in, its economic value as a forage plant, and its analyses. At the meeting following, D. K. Zumwalt will read a paper—subject not announced.

The subject of Farmers' Institutes was considered, and it was announced there has been formed or organized a permanent organization for holding Farmers' Institutes, the executive committee of which will meet at 1 p. m. on Wednesday, February 20th, at Judge Gist's office, to determine on a two days' programme. An Institute will be held the first week in April. In this connection a committee of one was appointed to make application for a portion of the State appropriation to the District Agricultural Society, to aid in holding Farmers' Institutes.

It was announced that Hon. W. W. Bowers had sent John Tuohy, for distribution among the members of Tulare Grange, a choice collection of vegetable seeds, and the reports of the Secretary of Agriculture for 1892 and 1893. These can be had on application to Mr. Tuohy.

### San Jose Grange.

The last meeting of San Jose Grange was largely devoted to consideration matters before the Legislature. There was considerable talk over the attempt to investigate the election frauds and corruption in San Francisco. In this matter no action was taken, but the consensus of opinion seemed to be that something should be done.

The action of the Legislature in repealing the law giving \$800,000 annually to indigents was referred to. There was no comment favorably or unfavorably.

State Lecturer Goodenough was present and made a pleasant address. Miss Frankie Blenis was appointed to have charge of the programme for Young Ladies' day, next Saturday.

Dr. H. A. Spencer was present at the open session and delivered an address on "Tuberculosis and Diseases of Domestic Animals." The doctor's remarks were exceedingly interesting. He pointed out the terrible dangers from diseased milk and butter as well as meat, and urged precautions measures.

"I see by the reports that the City Board of Health has asked the Common Council to buy a tester for milk. This tester will not show disease. It will only show that the milk has been adulterated with water, or burnt sugar, glycerine or something of that kind. It is useless to detect disease."

The doctor said the only way to tell disease was by an analysis of butter, and the only way, in many cases, a physical examination of the cows. This is the only way to detect tuberculosis. The doctor told of many diseased animals in this county and he attributes

the death of one-eighth of all human born to the use of diseased milk or food causing death in infancy.

Several members of the grange spoke of the matter. It was decided that the Board of Supervisors should be asked to increase the powers of the City Board of Health or appoint another that would have jurisdiction of the entire county.

A committee consisting of S. P. Sanders, chairman, R. P. McGlincey, Herman Pomeroy, Amos Adams and Dr. H. C. Spencer was appointed to go before the Supervisors and urge action.

### Temescal Grange.

Hon. J. L. Beecher, Jr., will visit this grange in Oakland on Saturday evening, March 2d, as State Grange inspection officer and lecturer, when it is hoped there will be a full attendance, including sojourning and neighboring patrons. Bro. Beecher is a past member of the California Legislature. He is an old and esteemed member of Stockton, and will be heartily welcomed by Temescal Grange.

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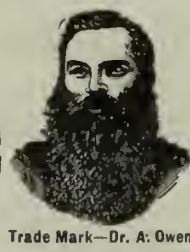
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## A Menace to the Fruit Industry.

San Jose Mercury.

A matter for deep public concern is the leasing of several thousand acres of orchard by a Chinese syndicate of San Francisco, comprising a large part of the Bidwell ranch and other orchard properties in the northern fruit belt. The Chinese own and will operate a cannery, at which the fruit will be prepared for the home and Eastern markets.

The fruit-growers are destined, it appears, to go through the same bitter experience that followed the suicidal policy of certain manufacturers in this State of employing Chinese labor because it was cheap, thus enabling them to undersell competing firms that believed in paying American wages to American workmen. The Chinese soon became expert in the manufacture of the goods they were employed to make and set up business for themselves. The same qualities in them that made it possible for their employers to profitably cut under others now made them successful rivals of their former employers, many of whom were compelled to suspend business.

The orchards leased by Chinese in the vicinity of Marysville, Red Bluff, Oroville, Willows and Vina will be worked by coolies. The cannery will be operated by coolies. These men, who are virtually slaves, have neither wife nor home. They subsist on rice, and five dollars a year will keep them clothed. They distribute no part of their meager earnings, and every dollar, beyond the rental money, earned by them for their masters, is sooner or later sent out from the country, never to return.

How do legitimate fruit-growers, paying a legitimate wage for legitimate labor, expect to compete with rivals who have the advantage of labor that practically costs nothing? And what will be the annual loss to the merchants of the northern fruit section, to the white man who can find no employment, and to the communities thus bereft of the support and growth that comes to every community in which white labor is actively engaged?

The fruit-growers have for years past made a practice of employing Chinese labor. Coolies have handled the fruit both in the orchards and the canneries. They have thus thoroughly learned the business of growing fruits as well as those of canning and drying. The fruit-growers, it is true, are not altogether to blame. It is difficult to procure a sufficient number of workers at a season when the demand for labor in the orchard is general and urgent throughout the State. Hundreds of white men refuse to accept that kind of work because the wages are comparatively small, and boys and girls are often careless, damaging the fruit and injuring the trees. Still the fact remains that orchardists in numerous instances, if not as a general thing, have yielded to a sordid motive in the employment of Chinese, whose labor is so much cheaper than that of white.

The recent leasing of the Bidwell and other orchards indicates a great danger. Orchardists are contending for lower freight charges and cheaper facilities for the transportation of their products. But they can hope for no concession that will not also be granted to the Chinese growers, who will undersell them in the markets. Other orchards will fall into their hands. It behooves the horticulturists to be alert and vigilant in behalf of their own welfare.

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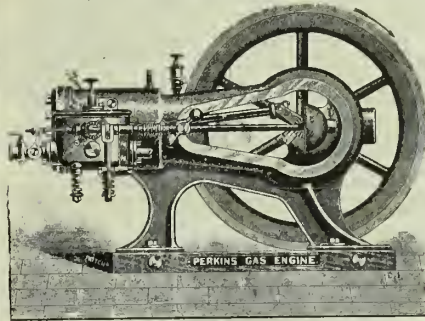
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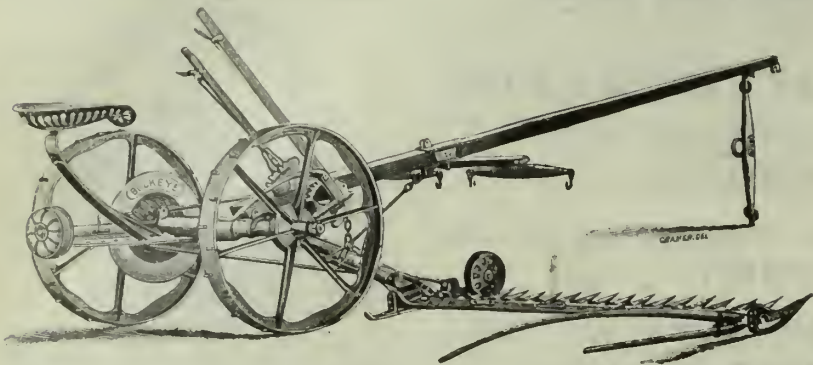
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THE MILLER & LUX RANCHO, FIREBAUGHS, CAL., NOV. 20, 1894.

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DEAR SIR:—The Original Buckeye Mower merits words of praise. On this Rancho we use twelve machines, which are in almost constant use from seven to eight months of the year, cutting the several crops of alfalfa. These mowers are put to a very severe test by being run so continuously and on extremely rough ground and through ditches partially filled with water. We have tried nearly all the leading makes of Mowers, but I pronounce the Buckeye superior to all others in ease of draft, strength and cutting qualities. The Buckeye costs us less for repairs than any other machine we have ever had on the Rancho. Yours truly,  
J. W. SCHMITZ, Supt. Miller & Lux Rancho.

It is the lightest, strongest, and without exception the best Mower in the world.

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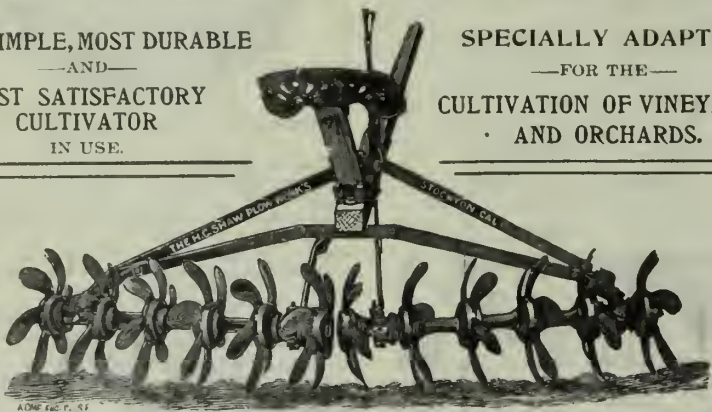
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CULTIVATOR  
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CULTIVATION OF VINEYARDS  
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Has EXTRA STRONG and HIGH BEAMS, being twenty-three inches in the clear; prevents clogging with trash.

HIGH WHEELS, twenty-six inches in diameter. AXLES, one and five-eighths inch cold-rolled steel.

THE HITCH is center draft, reaching from rear axle.

THE LIFT is extra high and easy. Furnished with or without seat attachment and rear wheel.



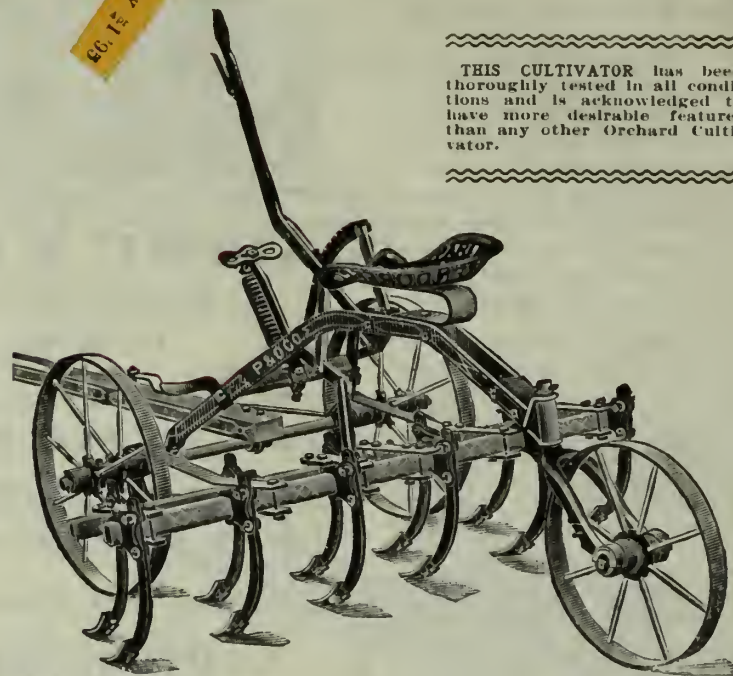
### The Morgan Grape Hoe

Is one of the greatest labor-saving tools ever invented for use in the culture of grapes and berries, and is especially adapted to vineyard work. After cultivating between the rows the MORGAN GRAPE HOE will take out all grass and weeds that remain under the vines and around vines and posts, and will thoroughly stir the soil close to the vine. The saving of time and labor will soon pay the cost of this tool, for this work is usually done by hand-hoeing—a slow and expensive way.

SEND FOR CIRCULARS.

## H. C. SHAW PLOW WORKS,

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### CANTON ORCHARD CULTIVATOR.

Combined Hand, Foot and Power Lift.

THE REAR FRAME, to which the legs or shanks are attached, is made from two pieces extra thick square gas pipe. This produces the very strongest form of frame. They are clamped together with thick wrought steel clamps and heavy bolts. Two wrought steel straps also clamp these gas pipes and project forward and encircle the axle, and are attached to the axle so as to raise and lower, which gives a low or high hitch to the gangs, and also gives more or less pitch to the shovels.

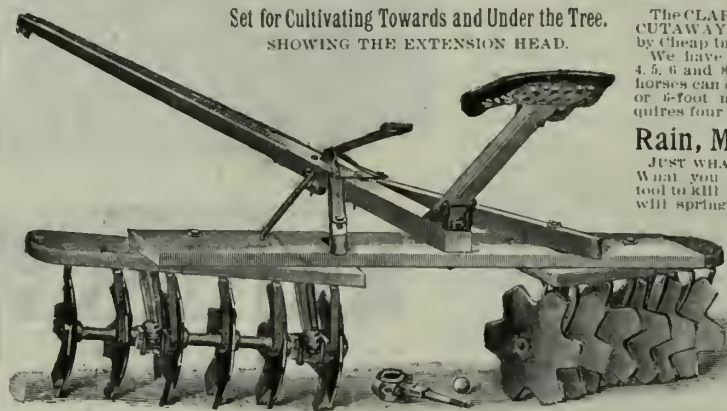
THE SHANKS OR LEGS, to which the shovels are attached, are made from steel with their front edge made sharp. These Shanks or Legs have a series of holes so they can be raised or lowered to meet any requirements.

RAISING LEVER.—We have a combined hand and foot Lever, and have also put on a strong spring to assist the operator in raising the gangs. This improved construction makes this the easiest Cultivator to operate now on the market.

SIZES.—No. 5, five feet, 11 shovels; No. 6, six feet, 13 shovels; No. 7, seven feet, 15 shovels. Write for prices.

### The Reversible or Fruit-Growers' and Orchard Harrow.

Set for Cultivating Towards and Under the Tree.  
SHOWING THE EXTENSION HEAD.



THE CLARKS is the ONLY CUTAWAY. Don't be fooled by Cheap Imitations.

We have a reversible, 4, 5, 6 and 8-foot cut. Two horses can easily handle a 5 or 6-foot machine. It requires four for an 8-foot.

Rain, More Rain!

JUST WHAT YOU NEEDED. What you need now is a tool to kill the weeds that will spring up and at the same time break the crust and pulverize your ground and prevent the moisture from escaping. We offer you for this purpose

The Famous  
Clark's  
Cutaway  
Harrow.

IT WILL DO IT, TOO, and do it better than any other too, you have or can get. We furnish (without extra charge) with the 4, 5 and 6-foot machines, if desired, an extension head, as shown in cut above. By using this head the soil can be cultivated clear to the trunk of the tree without the overhanging branches interfering in the least with the work of the horses.

ALLISON, NEFF & CO.,

421 & 423 MARKET STREET, SAN FRANCISCO, CAL.

## BEAN SPRAY PUMP CO.

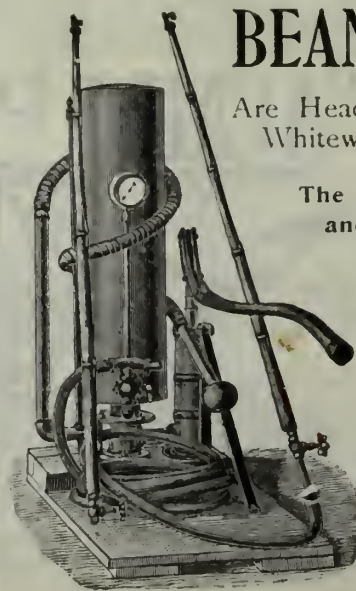
Are Headquarters for Complete Spraying and Whitewashing Outfits.

The Best Spray Pump, Best Spray Nozzles and Best Spray Hose.

Nozzles arranged to spray at any angle ordered.

THE BEAN CYCLONE NOZZLE—a new invention this season—is self-cleaning and throws a fine and penetrating spray.

The BEAN and NEW BEAN NOZZLES, so well known, are also our invention.



## Bean Spray Pump Co.

Los Gatos, Cal.



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## AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 10.

SAN FRANCISCO, SATURDAY, MARCH 9, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

### Cactus Blooms.

Those who rejoice in cactus collections are now enjoying the blooming season of their favorites. During recent years the popularity of cactus species has widely increased, and it is not uncommon for amateurs now to possess collections including hundreds of species. The ease with which a cactus may be plucked from its rooting and shipped by mail with little more care than would be given to a piece of merchandise; the small size of many species and the low price at which propagators furnish the more common kinds, makes it very easy to gain a large collection. Again, the little care which the culture requires, the monstrous amount of neglect which the plants will survive, and the small space which they occupy when not in bloom, renders cacti perhaps the most cheaply and easily kept class of plants in the world. And then they have peculiar and characteristic charms. All admit the beauty, and, in many cases, the gorgeousness of cactus blooms and enjoy the marvel of so lovely an inflorescence putting forth from so horrid a stem. The plants are so cruelly armed and so painfully wound at times, even those who love them most, that they have a repellant and hateful aspect to most beholders. In the pastime of imputing human attributes to plants, most people would count the cactus most cruel, spiteful and treacherous of all plants. And yet to one who gives attention to their wonderful variety of forms, the perfection of their spines and the systematic arrangement of them, they unfold interest and beauty which the casual observer makes no account of, and when the splendid blooms come the pleasure of the cactus lover becomes unspeakable.

The engraving on this page shows well some of the leading traits of the cactus. The bloom throws out of thought and almost out of sight the thorny stem or body of the plant, and each bloom is nearly as large as the matrix from which it springs. Sitting, as it appears, in an obscure corner and resting in a box of the rudest and coarsest construction, and probably have received such neglect as its environment indicates, it burst out into a splendor and fragrance of bloom which is incomprehensible and would be voted incredible by one whose eyes had not given indubitable proof of the reality. And as is this cactus, so are all its relatives, whether it be the giant *cereus* of our southeastern deserts, rising sixty feet high, or the tiny dwarf, *mammillaria*, which is but the size of your thumb; whether it be other species with spines curved and cruel beyond the claw of the fiercest animal or spines softened into silky hair, the cactus preserves the characteristics of its kind and is recognized as far as the eye can discern it.

It is interesting also to remember, too, that some of these plants serve important industrial purposes.

Many bear edible fruit and furnish in their fleshy substance sustaining food for stock. They also store up considerable quantities of juice, which has rescued from death many a lost desert wanderer. In Arizona and Mexico the natives make relishable preserves and toddies of the fruit, and from the stems of the giant species they obtain light poles for roofing their hovels. In its many aspects of unique form, pronounced beauty and utility in regions of scant

Mr. Mosher told of recent observations at the East, from which he concludes that our products are not yet generally known, and often where known have a bad name because of poor trash which has been sold under our name. All speakers agreed that the effort to show people well cooked, good California dried fruits must be carried forward. There should be means to show cooked fruit at the leading Eastern fairs and food shows, and at the great expositions which are held. This subject will be further considered at the next meeting.

### Wine Demand Continues.

The movement of California wines, to which we alluded last week, seems to be proceeding at a satisfactory rate, and must accomplish much for the outlook of this industry. It is telegraphed from New York that on Tuesday the 12th auction sale was held and port wine from the Yolo winery of Woodland sold at an average of 28 cents per gallon; Riesling, from Cordelia, at an average of 21 cents per gallon, and brandy from Stockton, 60 to 54 cents per gallon, buyer paying a tax of \$1.10 per gallon. The port sold higher than at the previous sale. These auction sales of California wines are attracting more attention daily from buyers, not only in New York City, but from near-by points, who are kept thoroughly informed of all offerings. The prices obtained, while a trifle under those demanded by jobbers, are said to send back satisfactory results to the owners of the wine. Shipments by water from San Francisco this week are very large. The Panama steamer took 3600 barrels of wine, amounting in all to 108,000 gallons. This is the largest shipment of wine to New York across the isthmus ever made, and almost the greatest amount which has gone by sea around the horn in one shipment. The cargo of wine this week is the second large shipment of that article which has gone across the isthmus. The Panama Steamship Company has made it possible for the producers of California to send their products to the Eastern markets within thirty days by its low rate of freights, and it is promised that quite a trade will be built



THE CACTUS BLOOMING IN OBSCURITY.

resources, the cactus family deserve admiration and study.

### State Horticultural Society.

At the meeting of the Society last week there was an interesting discussion of the lessons of the cooked-fruit exhibit made by the State Board of Horticulture during the recent Pure Food Show in this city. Prof. Allen called attention to the fact that California prunes are being retailed under French names in this city as high as 20 and 22 cents per pound, when the price should be but half that. If any one calls for California prunes they are shown poor, small stuff of no value. Thus the California product is being abused in the house of its friends,

up. It is evident also from the large shipment that there is quite a demand in the East for California wine.

ALTHOUGH the State has concluded to go out of the coyote scalp business, it has quite a bill to pay before it can get out honorably. A bill has just passed at Sacramento appropriating \$275,000 to pay California's coyote war debt.

THE Anti-racing bill, passed by the Indiana Legislature, was stolen before the Governor could sign it. Another engrossment was made and the bill was signed, so that the theft did no harm.

A NEW ORGANIZATION is the Bakersfield Mutual Sheep Shearers' Union.



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ALFRED HOLMAN.....Editor.  
E. J. WICKSON.....Special Contributor.

San Francisco, March 9, 1895.

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## The Week.

**Progressive** We are glad to know that the illusions recently made in our columns to the desirability of organization and co-operation among our breeders of improved swine for the advancement of the local pork interests, are attracting attention. Certainly, as we remarked before, there is every reason why this important producing interest should be more generally recognized and the desirability of home-grown pork products be prominently brought to the attention of the people. The importance of such effort clearly appears when it is mentioned, as it was recently by our State Board of Agriculture, that California imports \$1,500,000 worth of pork products every year. In our agitation for more progressive pork-making, we are glad to have the support of C. H. Sessions, of Los Angeles, vice-president for California of the American Berkshire Association. The following note we have just received from him:

To THE EDITOR:—A few weeks ago I noticed your reply to Mr. R. C. Kells in relation to swine-breeders' associations. The distances are so great in California that I do not think a State association could be formed and have its meetings well attended, but I would suggest that associations be formed in towns or localities and have frequent meetings. The members could read papers on the subject of swine-raising, and have discussions on them. They could subscribe for the leading swine and live stock journals and discuss the letters and articles in them; they could buy a number of books on the different subjects, such as breeding, feeding, care, diseases, etc., and have them circulated among the members through the secretary, who could act as librarian. The secretary could get quotations from the wholesale butchers and packing companies, keeping the members posted on the markets. There are subjects enough to interest an association for a long time, and, in fact, they would continually present themselves, coming up in different shape. A question-box would bring out a vast amount of information. I think such an association could be made very profitable to the members, not only in breeding, feeding, care, etc., but in marketing—making up carloads when one man would have but few. In that way the surplus fat stock could be marketed when prices were right.

C. H. SESSIONS.

Mr. Sessions is right about the disadvantage we have in this State in magnificent distances, magnificent railway fares and magnificent lack of speed in running trains, but still it ought to be possible to arrange a representative general meeting once a year. The idea of local associations is very good to start with. Suppose Mr. Sessions starts in with one in southern California, and then the central and northern parts may be able to emulate his success. There certainly ought to be some kind of stir in this business.

**Producers'** We have received a copy of the  
**Raisin Packing.** report of W. F. Forsey, secretary of the Producers' Raisin Packing Co. of Fresno, reviewing the operations of the last season. The report shows that during the last two years the co-operative company has saved enough in packing, as compared with the prices charged by commission packers, to build and equip their packing-house and pay for the land on which it stands. They have a packing-house which, as now enlarged, will handle 200 to 250 carloads of raisins in a season, and they advise raisin growers who have fruit enough to pack 100 carloads that they can save enough in a year to pay the cost of their plant in the difference between the co-operative cost and the

charges of commission packers. The report shows that the company in this way saved \$6500 last year in packing 150 carloads. In one place it is shown that the company packed 15,410 boxes layers No. 1 of twenty pounds each at an average cost per box of 194 cents. The price charged by the commission packer is 322 cents for doing exactly the same work. And again they packed 272 boxes of twenty pounds each of loose in one place and 229 in another place, the average cost per box being 122 cents against 20 cents charged by the commission packer. Still again we find that they packed 41,362 fifty-pound cases at an average cost of 16 1/2 cents per case, and the price charged by the commission packer is 25 cents. By such savings as these in handling their own product, the producers soon own their own outfit and are independent in the matter of preparing their output for the market. The secretary's report gives full figures of the different operations of the company. It shows that they handled 3,121,628 pounds of raisins and dried fruits in the season of 1894, and that their property is worth \$10,536.99.

## California Oranges for Florida.

The completeness of the disaster which has befallen the Florida orange growers is shown by the fact that California is now sending into that State oranges needed for the local markets. A dispatch from Pomona, Los Angeles county, says:

S. M. Knowles, of the Ponce de Leon, has wired that not even a box of decent oranges can be had in all Florida. He has ordered the weekly shipment of a carload of the finest navels from Pomona valley, to be sent to him until further orders. Similar orders, but smaller, for southern California oranges, from others of the hotel-keepers and wine-resort managers at Jacksonville, Deland and Lakeworth, have come to Ontario, Riverside and Redlands in the past week. These shipments will continue until about April 15th, when the Northerners usually leave for their homes. Care is taken by the firms and associations who will fill these orders for Florida to send the very best of our citrus products. Every one in Pomona, as well as in the other southern California towns, feels elated at the opportunity to show what can be done in orange growing here, and to prove what has long been claimed here and derided in Florida, that southern California gets far better prices for oranges than do the growers in Florida. A finer flavored, juicier and cleaner crop of oranges was never grown in this region than that now on the trees and on the way to market.

## The New Dairy Law.

Governor Budd is giving all kinds of dairy interests a chance to expound to him their views on the question of making bogus butter and filled cheese. On Wednesday J. H. Hegler represented the filled-cheese industry, Attorney Lilienthal appeared for the oleomargarine contingent, and Senators McGowan and McAllister and Messrs. Martin and Hebborn led the dairy forces in the verbal conflict. The debate was a spirited one. Two years ago the same bill passed both Houses, but Markham was induced to veto it. Assemblyman Johnson, of Humboldt, created some amusement by stating that the citizens of Humboldt hanged ex Governor Markham in effigy when he vetoed the pure butter bill. It is held that Gov. Budd will approve the bill. There ought not to be much doubt about that. Bogus dairy goods are not as fashionable as they used to be. The Eastern States are making life more and more disagreeable for them, and they ought to be shown no mercy out here. We ought to supply pure butter from here to all Pacific ports. This week one steamer took 30,000 pounds of butter for Japan and China. Who can tell how much of that was bogus? This matter should be pressed.

## The Fairs.

The Legislature is still grappling with the problem what to do with the agricultural fairs. The first proposition was to throw them all to the bow-wows—State fair and all. The State fair soon gained its case for continuation on the old basis of \$40,000, for two years. The district fairs are oscillating from \$75,000 to the old figure of twice that sum. It seems likely that they too will see the Legislature adjourn after giving them the old appropriation. Representatives of the district associations met in this city on Tuesday and adopted a resolution in which the Legislature was requested to allow the different district fairs the full amount of last year's appropriation, or, if there is any reduction made, to reduce the State Fair Association proportionately, or let them remain as they were. Dates were definitely fixed for the following meetings: Breeders' Association, San Francisco, July 22 to 27; Golden Gate Association, Oakland, July 29 to August 3; Vallejo Association, August 5 to 10; Napa Association, August 12 to 17; Petaluma, August 12 to 17; Woodland, August 26 to 31; Sacramento, September 2 to 14; Stockton, September 16 to 21; San Jose, September 23 to 28. Dates were not definitely fixed for the other meetings, there being some clashing of dates.

## Board of Horticulture.

At this writing it looks as if the State Horticultural Commission would be continued, though perhaps on a little narrower basis than hitherto. The latest aspect of the matter looks to an appropriation of \$10,000 for the maintenance of the Board in addition to the salaries of its executive officers. Practically this programme will involve a cut of about one-third from the old allowance.

## From an Independent Standpoint.

While San Francisco has always been the center of capital and business in California, she has never accepted the duties of general leadership. When the transcontinental railroad was to be built thirty years ago, it was not San Francisco but Sacramento that gave courage and leadership to the enterprise. When levees had to be made to protect the Sacramento valley from flood, the capital had to be found in the East. When new methods had to be devised twenty years ago to enable the California grain farmer to compete with the then new grain fields of India, the mechanical genius was found not in San Francisco but at Stockton; and when the Grangers undertook to defend themselves against the Shylocks by creating the local warehouse system, they had to go abroad for the necessary funds. Again, when capital was required to make the arid regions of central and southern California productive by irrigation, San Francisco was found to be no dependence at all—worse than none, for her refusal to take the irrigation bonds discredited them in other money markets. Every California bond and every California mortgage held beyond the Rocky mountains is a separate indictment of San Francisco on account of her failure to co-operate with the country. In all the years of San Francisco's existence as a commercial city, she has been little more to California than the toll-taker of its Golden Gate; she has largely absorbed the wealth of the land which has been poured in upon her by the force of gravity. Her situation—not her spirit or her enterprise has made her fortunes.

With such a history it is not surprising that now, when the city seems at last waking up to a sense of her responsibilities, she exposes by the awkwardness of her endeavors how unfamiliar she is with the duties of leadership. For example, a meeting has been called under the patronage of the Board of Trade, the Chamber of Commerce and the Mechanics' Institute, to consider the matter of local manufactures; and the object is declared in the call to be

To educate the masses to the needs of fostering home industry; secure necessary legislation in behalf of these industries, and to take an active interest in general business affairs, etc., etc., etc.

From this it would appear to be the idea of our august commercial bodies that what is needed for the promotion of home manufactures is the "education of the masses." Now, since this movement proceeds from motives unquestionably good, it seems hardly right to speak of it as it deserves; therefore the RURAL smothers its sense of humor and begs leave to say that the way to create home manufactures is to withdraw from the banks some of the money there lying idle and put it into shoe-making shops, implement factories, cloth-making and clothing-making establishments, etc., etc. The masses do not need to be educated so much as the capitalists. The masses are the buyers and they will buy where they can buy cheapest, and no system of "education" will make it prudent or right for them to do otherwise. Let capital do its part and the consuming masses will do theirs.

Another project just hatched looks to the increase of population in San Francisco and has taken the suggestive name of the "Half-Million Club." At a meeting held on Monday an interesting assortment of schemes were put forth. One man wanted to sell bonds to the extent of half a million dollars and improve the streets and sidewalks; another wanted to amuse the public with musical and other entertainments to the end that the idle rich would come here to live and spend money in the shops; and so on. Again the RURAL smothers its smiles and begs leave to suggest that the way to build up San Francisco is to first build up the country. Let the Valley road be followed by the building of roads north and east. Let these be followed by the building of factories, which will make a market for the productions of the country and afford profitable employment for the people. Smooth streets and theatricals are all right in their way, but what is wanted is not amusements but steady work at fair wages.

The regeneration of San Francisco, we repeat, is chiefly to be hoped for at the hands of her capitalists. Whatever has been accomplished in California in the



past forty years has largely been absorbed by them. They are not, as capitalists go, a bad set of men, but they are woefully deficient in just the sort of skill needed at this time. They are not, as a rule, men trained in business. Their wealth has very largely been acquired by inheritance, in speculation, by increase in the value of real property and by mining operations. So far as we know, there is not a good mechanic in the whole list of millionaires; and it is a very unfortunate fact. Just think what it would mean for California if her younger millionaires—leaving out of the question the older men, who are past an active life—had each some special business equipment! If Fred Sharon were a leather maker we should probably have the biggest and best tannery in the world. If young Phelan had been trained in the machine trade we should have an establishment which would make even the great Union shops second class. If Charley Fair were an expert miner, it would set a thousand stamps to dropping. If Jimmy Flood were a shoemaker, the hide product of California would be consumed at home and "the masses" would walk in California-made shoes. In one instance—at Benicia, where Mr. Wakefield Baker employs some hundreds of men in working up California materials into implements for California farmers—we see what may be accomplished through the combination of young energy, modern skill and large financial resource. Can anybody reckon the benefit to California that would follow from a hundred such establishments? But this case stands almost alone. Generally speaking, our great fortunes are employed in land speculations, in banking or in other ways which contribute little or nothing to the welfare of the city and State. It is, again we must be allowed to say, the capitalists of San Francisco who need to be educated. And that the process is well in progress, and that it promises the best results, nobody can doubt who watches the movements of the times.

The most notable political event of the week is the birth at Washington of a new national party in the interest of free silver coinage. Its sponsors are Senators Jones and Stewart of Nevada, Senator Walcott of Colorado, Messrs. Newlands, Warner and other well known free-coinage advocates. In a manifesto addressed to the American people it is set forth that both the Democratic and Republican parties are under the control of gold mono-metallists; that by their adherence to these parties the friends of silver (who it is assumed are a majority of the people of the United States) are defeated in their purposes; that the time has come when honest friends of silver must separate themselves from all political entanglements and stand together for a single paramount purpose. The silver question is declared to be the chief issue before the people, and it is proposed by the new party to make a straight fight for control of the government in the general election of next year.

This movement should at least have the effect to segregate the different classes of silver opinion which hitherto have been hopelessly mixed. For example, there is the "friend of silver," whose interest in the matter grows out of one relationship or another to the mining industry. He favors free coinage as a means of disposing of the product of the silver mines. Then there is another "friend of silver" who believes that the government stamp is the basis of money. He favors free coinage because he regards it as a step in the direction of fiat money, but he would prefer a straight greenback currency. Again, there is another "friend of silver" who believes that by free coinage we should reduce the value of our money unit, and thus scale down all property represented by credits. He believes in free coinage as a means of making money plenty and cheap. And again there is another "friend of silver" who believes that the gold standard upon which the operations of the commercial world are now based works persistent injustice to the producer and the debtor, and that the correction of this injustice lies in the restoration of the old bi-metallic standard. This last "friend of silver" may be an advocate of free coinage, but he is much more likely to hold that the road to a practical bimetalism lies through international agreement upon a coinage ratio.

This, we believe, is a fair analysis of the silver

sentiment at the present time. Between these various groups there is little real sympathy, for their beliefs and purposes are often at total variance. For example, where is the basis for political association between the man who favors free coinage in the interest of the silver industry and the man who stands for bimetalism on the basis of international agreement? There is none whatever; they have nothing in common save a few economic terms to which each gives a special meaning. If the new party shall succeed in so drawing the lines as to clear up the confusions which complicate the silver question—if it shall succeed in enabling each "friend of silver" to know just where and with whom he stands—it will have performed a genuine public service. As to the practical political success of any party framed in support of a single principle—whether it be silver, greenbacks, prohibition, native American or what not—it is not easy to be hopeful. Experience proves that the American people do not readily leave established political associations to join in such movements.

In November last certain vague reports reached the western world to the effect that in the previous September some thousands of Christians in Armenia—a country of southwestern Asia, under the dominion of Turkey—had been massacred by Turkish troops. It was a story to heat the blood, for it accounted such atrocities as burial alive, burning at the stake, the violation of women and the ruthless maiming and braining of young children. Religious and humane sentiment was profoundly stirred throughout the Christian world, but efforts to get specific and definite information came to nothing. Questioned by England as to the reports, the Turkish authorities made light of them, declaring that an unimportant collision between a body of rebellious peasants and the Armenian militia (the so-called Kurds) had been exaggerated into a wild story of massacre. It was, so they assured the English and other foreign ministers at Constantinople, an event entirely political in its character and in itself a matter of every-day—a thing too trifling for diplomatic discussion. But in spite of these assurances the story would not down. Some weeks ago the Associated Press determined to do what no Government seemed able or willing to do, namely, to thoroughly and reliably investigate the matter. Accordingly it sent a correspondent in the character of an ordinary mercantile agent into Armenia; and his report has just been given to the public. It confirms all that has been told and adds to it statements too revolting to be detailed. The outrages inflicted upon Armenian women by a brutal soldiery are simply unspeakable. In one instance one hundred and fifty men, women and children were buried alive in a single trench. In all, somewhere between six and ten thousand persons were made away with by one means of murder or another in the massacre of last September; and this event was only the doing by wholesale of things incidental in the daily history of the country.

To understand the motive of these cruelties it is necessary to review briefly the political conditions of Armenia. As all the world knows, the Turk is an intruder in the countries he now occupies in Europe and in Asia. He brought them under his rule by violence, and in spite of his real weakness is allowed to retain them through the jealousies of the Western nations. He stands between Russia and the Mediterranean and between the British possessions in India and the north as a sort of "buffer;" and because he is thought to be useful in this character is allowed to occupy regions to which he has no historic right. Among the countries included in his dominion there are many which from—and even before—the time of Constantine have been seats of the Christian religion. His administration of these countries has been marked by every form of violence and outrage. For centuries the Christians of Bulgaria, of Roumania and other provinces of Christian Turkey have made their moan against barbarities unspeakable just as poor, suffering Armenia is doing to-day. The present conditions in this last named country have been chronic in them all, and the slow sympathy of Christendom must in time gain for her the relief which some years back it gave to Roumelia, Bulgaria and Roumania. The

status of the Armenian Christians—in fact of all the hereditary inhabitants of the country—is that of prisoners of war with no rights or privileges which a Turk is bound to respect. They are not allowed to serve in the army or to have arms in their possession. They have no part in the administration of the government, which is in character a military despotism. It is an article of the Moslem faith to "smite the infidel," and with what bitterness this is carried out the world has often seen. No Armenian, no matter how humble his life or how faithful his character, is safe from the brutal Kurd, half soldier, half brigand, who rides about the country inflicting his ruthless will without hindrance. No Christian woman is safe from his assaults, and it is a common fact that the bayonet-thrust is the sequel of her miseries. How these things are regarded at Constantinople is illustrated by the fact that the military commandant under whose administration the massacre of last September occurred has been specially rewarded by the Sultan for suppressing a rebellion—such a rebellion as a community of unarmed peasants goaded by desperate cruelties could offer to a body of well-armed and disciplined soldiers many times outnumbering them.

As to what duty rests upon the Christian nations in this matter of Armenia, they must themselves determine. A well-known commentator declares it to be a principle of international law that interference is justified "where the general interests of humanity are infringed by a barbarous and despotic government." Another writer in this connection quotes, with great propriety, Lowell's familiar lines:

"He's true to God who's true to man; wherever wrong is done  
To the humblest and the weakest, 'neath the all-beholding sun,  
That wrong is also done to us; and they are slaves most base  
Whose love of right is for themselves, and not for all their race."

The spirit of these lines is very much abroad in the Christian world at this time and it will not sleep until the wrongs of the poor Armenians are righted.

#### A Nut for Mr. Ohleyer to Crack.

PRESTON, SONOMA CO., March 1st, 1895.

TO THE EDITOR:—As a farmer I am very greatly interested in the statements from other wheat growers, concerning the cost of raising wheat, etc., now being printed in the columns of your paper. The remarks of Mr. George Ohleyer, of Sutter county, printed in your issue of February 23d, have especially attracted my attention because I am farming a body of wheat land in Butte county no great distance from Mr. Ohleyer's place; and I find it impossible to match the figures which Mr. Ohleyer gives. Estimating the cost of wheat, he says:

Wheat cost me per bushel in the sack, including seven per cent interest on the value of land, etc., 46 cts. for 10 bushels to the acre; 32 cts. for 15 bushels; 25 cts. for 20 bushels; 24 cts. for 25 bushels, and 18 cts. for 30 bushels. The present value of land upon which wheat is produced at cost named is \$50 per acre.

This statement does not seem to me to prove itself. For example, take the statement concerning ten bushels per acre: Now the annual interest on one acre valued at \$50 at seven per cent I figure at \$3.50. Ten bushels of wheat at 46 cts. per bushel would amount to \$4.60. The difference between the annual interest and the annual income would be \$1.10. Now, I should like to have Mr. Ohleyer enlighten me as to how he contrives to make one dollar and ten cents cultivate, seed, harvest and sack one acre of wheat. Possibly there is some mistake in Mr. Ohleyer's figures. WARREN GREEN.

#### A Note from Mr. Worthen.

WILLOWGLEN, CAL., March 5, 1895.

TO THE EDITOR:—An ambiguous sentence uttered by me at an open meeting of San Jose Grange, and reported, not as I meant, has been the subject of considerable comment. This is the sentence: "If every man, woman and child in California would eat ten pounds of dried prunes, our entire crop could be marketed in this State."

If people will note that "our" refers to Santa Clara county, of which I am a resident, and that dried prunes does not mean all dried fruits, and that "marketed in this State" does not mean consumed in this State, they will get an approximate idea of my meaning. Yours truly, G. W. WORTHEN.

#### Gleanings.

VICTOR PIEZZI is going to start a creamery at his place near Santa Rosa.

THE Kern County Fruit Exchange shipped thirty-two carloads of raisins and dried fruit the past season. All but seven cars went to Philadelphia.

FIVE HUNDRED acres on the Bacon ranch, near Visalia, will be planted to trees this season—chiefly prunes and peaches. Next season three hundred acres more will be set out.

NEWCASTLE, Ind., March 3.—Carrie, the four-year-old daughter of William Williams, is dead from the effects of eating frozen oranges. In commenting upon the death, an old doctor pointed out that the health authorities everywhere should take strict measures to destroy the thousands of boxes of frozen oranges shipped from Florida.

OROVILLE Register: We hear almost daily of men killing birds that are of much benefit to the orchardist. It appears to us as if some general plan ought to be carried out by which men and boys can be taught the great necessity of letting these insect destroyers do the work that nature intended



them to perform. If the fruit-growers themselves would look more carefully into this question and show the value of these birds, much could be accomplished. Too many men watching birds eating a little fruit hastily consider that these birds are their enemies and at once give license to shoot them on sight. Each orchardist ought to have a list of the beneficial birds posted in his packing sheds during the fruit season, and, if possible, get specimens of the birds and teach those in their employ what ones ought to be protected. This matter may seem a trifling one, but it is a great deal bigger than many give it credit for.

### Rainfall and Temperature.

The following data for the week ending 5 A. M., March 6, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA<br>STATIONS. | Total Rainfall for the<br>Week | Total Seasonal Rain-<br>fall to Date | Total Seasonal Rain-<br>fall Last Year to<br>Same Date | Average Seasonal Rain-<br>fall to Date | Maximum Temperature<br>for the Week | Minimum Temperature<br>for the Week |
|-------------------------|--------------------------------|--------------------------------------|--------------------------------------------------------|----------------------------------------|-------------------------------------|-------------------------------------|
| Eureka                  | 32.40                          | 41.02                                | 30.33                                                  | 60                                     | 38                                  |                                     |
| Red Bluff               | 24.20                          | 18.21                                | 19.55                                                  | 76                                     | 44                                  |                                     |
| Sacramento              | 21.54                          | 13.51                                | 15.33                                                  | 70                                     | 46                                  |                                     |
| San Francisco           | 21.97                          | 15.02                                | 18.85                                                  | 68                                     | 48                                  |                                     |
| Fresno                  | 10.79                          | 6.13                                 | 8.48                                                   | 74                                     | 46                                  |                                     |
| Los Angeles             | 11.40                          | 6.30                                 | 15.37                                                  | 84                                     | 40                                  |                                     |
| San Diego               | 9.88                           | 3.92                                 | 8.27                                                   | 82                                     | 44                                  |                                     |
| Yuma                    | 2.97                           | 2.16                                 | 2.86                                                   | 82                                     | 50                                  |                                     |

### Weather and Crops.

State Weather Service Report for February—All Indications Point to a Productive Season.

Director Barwick of the California Weather and Crop Service summarizes as follows:

The average temperature for February was: For Eureka, 50°; Fresno, 52°; Independence, 46°; Los Angeles, 56°; Red Bluff, 52°; Sacramento, 53°; San Francisco, 54°; San Luis Obispo, 54°; San Diego, 58°; Point Reyes, 50°.

As compared with the normal temperature, there was an excess of heat reported from all portions of the State ranging from one degree at Los Angeles and San Luis Obispo to four degrees at Eureka and San Diego, while the Sacramento and San Joaquin valleys were two degrees above the normal.

The total precipitation was: For Eureka, 3.60 inches; Fresno, 1.70; Independence, 1.20; Los Angeles, .50; San Luis Obispo, 1.80; Red Bluff, 2.80; Sacramento, 1.84; San Francisco, 2.30; San Diego, .50; Point Reyes, 1.34.

As compared with the normal precipitation, a deficiency is reported at Eureka of 3.73 inches; Los Angeles, 2.87; Red Bluff, .62; Sacramento, 1.14; San Francisco, 1.42; San Luis Obispo, 1.98; San Diego, 1.99; Point Reyes, 1.44.

The excess of temperature and deficiency of rainfall has produced a wonderful effect upon the growing products of this State, although in some portions of southern California and the San Joaquin valley a few showers are desirable to break the crust formed by drying winds since the heavy downpours of January have ceased.

One thing to be reported from this State for February, that in all probability the like of which could not be found in any other country in the world, the blooming of almonds, peaches, plums, etc., for a distance of 500 miles north and south. Almonds are in bloom from north of Red Bluff to the San Diego boundary line of Mexico. The distance from Red Bluff on the north to San Diego on the south is upward of 500 miles.

ALAMEDA (Niles)—The present month has been unusually fine growing weather. Pasture is growing rapidly and stock doing well. Apricots and peaches in bloom, with the prospect of an abundant crop. Commenced shipping early potatoes from here. Plowing nearly all done except on lowlands. Almond orchards in full bloom. (Livermore)—Crops are in fine growing condition, late showers having done much good. Prospects for good crops were never better. (San Leandro)—The pleasant weather of February has allowed the farmer to plow and prune. Peas and beans are looking well. Quite a number have planted potatoes during the last week. Apricot trees are in bloom, and, if the fine weather continues, cherry trees will be in bloom next week. Grain is looking well and growing fast. Many are getting contracts with canners for tomatoes and planting seeds under glass to have the plants ready when the frosts are over.

BUTTE (Biggs)—Have had some good growing weather the last three weeks and some wet weather. The early-sown wheat has suffered more from wet weather than late-sown. Early-sown looks yellow in places, and the lower blades are falling off and the stools will be cut off if wet weather continues; but, if wet weather ceases, the damage will not amount to much. From observation and information, the loss is small so far. (Chico)—The weather has been very beneficial to crops this month. The farmers are through plowing and have most of the seed sown. The orchards have also been benefited by the fine weather during this month. (Durham)—During February the conditions have been very favorable for plowing and seeding and for the growth of grain and pasture. Some of the farmers are not done seeding yet. (Oroville)—The grain acreage of Butte will be smaller than usual this year owing to the long-continued rains during part of December and January. (Palermo)—The rain this month has

been very light and fruit growers have been pruning, spraying and planting trees. Almond, apricot and plum trees are in blossom. Grain and vegetables are growing finely. The last day of February finds the thermometer at 75°. Highest and lowest temperatures, 75° and 30°. (Pentz)—During the month we had 12 clear, 13 cloudy and 3 days on which rain fell. Highest and lowest temperatures, 76° and 36°; average for the month, 56°. It has been warmer than usual for February, as almond, apricot and peach trees are now in bloom and the plum and apple soon will be.

CALAVERAS (Milton)—February has been very favorable for crops and for all ranch work. No frosts; rainfall, 2.30 inches enough for grass and grain. Sowing less than usual on account of previous rains.

COLUSA (Colusa)—Some grain has been drowned, but only a very small proportion. The remainder is growing finely; even that which was overflowed, if not drowned, bids fair to make a good crop. The winter plowing will be late because the ground is so wet, but there seems to be no fear that there will be time to get grain in on time to make good crops. (Grand Island)—There is no grain up yet in this section. The farmers are still plowing, sowing and harrowing. It has been a very backward spring. (Sites)—The weather during the last week has been fine for growing crops—warm nights and days—and while we have had some cloudy weather, still it has been warm all the time. The wheat is stooling out finely and covers the ground well. One could hardly complain of any of our February weather. Highest and lowest temperatures, 65° and 45°. (Williams)—A little frost the first week in the month, but scarcely a trace since. Almonds and apricots are in full bloom and grain and feed are growing finely. Conditions very favorable.

FRESNO (Huron)—The crops are looking in exceptionally fine condition, although the acreage sown is not quite as large as it has generally been for the past few years, but it looks much better. In the sinks of Poso, about one-half to four miles northwest of Huron, there are about 13,000 acres of wheat and barley. This has been flooded three or four times by the flood from the Coast Range. The farmers have dammed the creek down which the water comes and turned it off to the south and east of town on what is called the plains. The sinks do not need any more water, but the country east and south of Huron will require more floods of rain to insure good crops. There are about 6000 acres sowed on the plains. With the ordinary spring rains ten to fifteen sacks to the acre will be harvested in the sinks. The sheep feed in the Huron country is very fine. With a few light rains in March there will be good sheep feed all summer, with the abundant stubble which will be left after the harvest. The sheepmen will not have to take their sheep to the mountains. It is estimated that fifteen combined harvesters will be used to harvest the season's crop. As twenty-six to thirty horses are used on each machine, there will be quite a demand for horses. (Fresno)—Weather favorable for all industries. Apricots budding heavily. Prospects for large grain crop. (Reedley)—Heavy rains prevented farmers from doing as much seeding first of this month as was intended. Quite a large acreage will be summer-fallowed. Some volunteer summer-fallow wheat is making a rank growth. Prospects were never better for crops in this vicinity. Vineyard and orchard plowing has been somewhat delayed by the rains, but is progressing well at present. Very fine weather the past two weeks. (Easton)—The present month so far has been one of ideal weather for grain. The growth of wheat on the heavier lands is remarkable. Fruit trees of every kind are full of buds. In another week every orchard will look like a huge bouquet.

GLENN (Fruit)—We have just passed a week of fine growing weather. Fruit trees promise an abundant yield. One good indication of better times is that farmers are planting something else besides wheat and barley which have reached a price lower than they cost to produce.

HUMBOLDT (Eureka)—Exceptionally favorable weather for all outdoor work. Garden truck doing well. Grass, feed and stock in good condition. The weather has been exceedingly pleasant and more appreciated in contrasting our favorable conditions with the blizzard-haunted regions east of us. Just enough rain and favorable temperatures to keep things growing and make outdoor work a pleasure.

INYO (Independence)—The effect of the weather on crops has been very beneficial, on account of unusual rains in the valleys and the great amount of snow on the mountains. Ground is being plowed for wheat and other early cereals.

KERN (Bakersfield)—The weather has been dry; a few showers would have been acceptable, as they would have saved the labor of irrigation. The season is two or three weeks earlier than usual; almonds are in full bloom, and some peaches and apricots showing. The large showing of alfalfa is a good stand, and grain is promising well. (Calloway Canal)—There have been no damaging effects to crops from frosts, high winds or high water during the month. All kinds of grain and young alfalfa looking well. Too early to report on fruit, but trees and vines look well, having received no damage from any source.

KINGS (Hanford)—The outlook for crops of all kinds in this county could not be better. A large acreage of grain and alfalfa has been put in and is growing splendidly. Fruit of all kinds promises a crop unsurpassed in quantity. There is but little fear of frost, it being our experience that we have no frost when rain is plentiful.

LOS ANGELES (Los Angeles)—The month of February was warmer than the average for this period of the year; the monthly mean temperature exceeded the normal by 2°. The rainfall was deficient, being 2.91 inches less than the average for the month. The weather conditions on the whole were favorable to growing crops, though grain and grasses at the close of the month began to show signs of the need of moisture. (Pomona)—The weather has been perfect, light showers from 9th to 13th inclusive giving the grain on the sandy land a fresh start, but not retarding work much on low damp beet land. The most of the latter is too wet to work, but is drying rapidly. Beets are being planted on the sandy land. Oranges are being shipped East again after the Eastern freeze and are bringing good prices. Pruning in deciduous orchards, and cultivation are being done rapidly. (Covina)—The past month has been very favorable to growing crops generally. Oranges are moving off regularly, and the price is satisfactory. No damage this month from wind or frost, except slight damage to strawberries early in the month.

MADERA (Berendo)—Crops in the surrounding country in good condition. No damage caused by drouth or winds. MARIPOSA (Mariposa)—Crop prospects look favorable. Volunteer and summer-fallow look well; winter-sown grain has been damaged to a small extent in low situations. Grain is still being sown wherever the ground is dry enough to be plowed. Nothing can be said as yet about fruit prospects.

MENDOCINO (Hermitage)—We are having warm days and foggy nights. Grass and grain are growing fast. (Ukiah)—The weather has been very favorable for fruit prospects; it has not been so cold as to check the growth of grain, neither has it been warm enough to bring forward the fruit bloom so as to endanger it by possible late frosts. The greater part of the month has been favorable for plowing and sowing, which are about completed.

MERCED (Los Banos)—Warm weather has followed all rains so far, and grass is quite high. Grain looks fine. The farmers are through sowing grain. Alfalfa looks fine; the winds have not damaged the crop any. (Volta)—Crop conditions continue favorable, although it is now apparent that on some fields the stand of grain is not good, being too thin. (Livingston)—Crops in this vicinity are looking fine, and the farmers

feel very much encouraged over the outlook. If we have our usual spring rains the farmers will have nothing to fear, as they think the grain is most too far advanced to be blown out by the winds.

MONTEREY (Jolon)—The weather has been very favorable for crops during the entire month. Light frosts have prevailed since the 24th, but not heavy enough to do any damage.

NAPA (Napa Junction)—Prospects much brighter than during the latter part of January. Unless something unforeseen occurs crops will be rather above the average. The warm weather of the past few weeks has greatly improved the appearance of all grains in this vicinity.

NEVADA (Chicago Park)—Month has been very warm. Grain, though put in late, is doing well. Fruit trees are looking in fine shape, with buds and spurs, showing a prospective large crop. Buds are swelling fast. Almonds and plums are nearly out. We only fear a light frost. Very little planting in the orchards, save filling in.

ORANGE (Tustin)—The crop conditions for the month have generally been favorable. No damage from frost or winds. Rainfall about the average for the month. The ground is well saturated with moisture, but not too much so. A large acreage is seeded to barley and now promises a fair yield. A considerable planting of trees has been made, mostly olives, deciduous fruits and walnuts. The orange crop is moving briskly at fair prices.

PLACER (Newcastle)—Having been no frost to damage vegetation, and an ample supply of grain, gives every indication that a good crop of hay and fruits will be the result. (Loomis)—Crops look fine; no damage. Orchardists have about done pruning and are busy plowing. Fruit trees looking well and there is every indication of a large crop. There is a large increase in acreage of all kinds of fruits and berries. Slight frost two mornings in last week of February, but no damage done.

RIVERSIDE (Riverside)—The late rain could not have come at a more opportune time—just after many thousands of acres of grain had been sown. All will reap a rich harvest. The rain came just to order. Oranges in fine shipping condition. Five hundred cars to date. Orange trees in favored spots in bloom, also peach, apricot, etc. Month has been very favorable so far as temperature is concerned. Several northerly, but not strong enough to cause many windfalls. Grain crops are looking very fine. Everything points to a prosperous agricultural season. Wildflowers very plentiful, affording good bee pasture. (Winchester)—The weather for the past week has been very favorable for growing crops. Grain and grass growing nicely. A very large portion of our valley is covered with wheat and barley. Many acres are new being prepared for alfalfa, which is destined to be a leading crop.

SACRAMENTO (Franklin)—The condition of the grain is somewhat better since last report. The few warm days has made the crops grow considerable. Farmers are anxious to put in a crop of barley, but the ground, so far, has been too wet. (Ryder)—The crops in this vicinity are doing well at present. Grain looks fine. The excessive rains have tardied the sowing a great deal. (Clay)—The last two weeks of sunshine has improved grain. Pasture is good. Stock is looking well for this time of year. Some few farmers are sowing grain yet. All wild flowers are in bloom. Apricot and almond trees in bloom. (Sacramento)—Crops of all kinds are looking very promising. The warm weather, with showers, for the last month have made grain and bay push forward very fast, and will be heavy yield. Fruit trees are coming into bloom, and will soon all be out, and with favorable weather for the next two months there will be no scarcity of fruit. (Elk Grove)—Wheat crop fair; good prospects of fruit crop. Rivers high by snow from mountains. So much rain that farmers cease to put in crops—too wet to plow. (Trask)—Since last report the weather has been warm. No frost, and very favorable for fruit trees. Spraying in general progress; pruning all done. Apricots in partial blossom. Buds on peach and pear swelling, but do not indicate a large crop. Alfalfa growing rapidly, with promise of early cutting. A large acreage drowned out. Plowing going on and grain and potatoes being planted. (Union House)—Crops are looking fine but in low places a little thin. A large acreage of barley is expected to be sown, as the weather is favorable for barley at present. Weather on crops for last few weeks could not be improved upon. (Orangevale)—The orchardists in this section are all busy plowing. Almond trees are in full bloom. Apricots, peaches and prunes are coming along fast. Prospects for a large crop of nuts and all kinds of fruit were never better. Grain is coming up in a manner to cheer "ye bonest granger," early sown looking especially fine. Weather is delightful.

SAN BENITO (Hollister)—The prospect for a large grain and bay crop was never better. The fine weather in February has been of great benefit to the farmer, and a large acreage has been seeded. With the usual spring rains an abundant harvest is assured.

SAN BERNARDINO (Cibola)—February has given ideal crop conditions, the soil being moist and the weather warm and fine. The rainfall for the month was 1.01 inches. About 1000 acres of beets are already planted.

SAN DIEGO (San Diego)—February has proved a warm and dry month in this section, with quite a deficiency in rainfall. Fruits and crops all doing well so far, but rain would be welcome and is now needed in some places. (Fall Brook)—Uniform seasonable weather for February, and the moderate rainfall has sufficed to keep vegetation in thriving condition, no high drying winds or other drawbacks having occurred. All crops making satisfactory progress; pasture especially good. Apricot, quince and other trees showing bloom. Willows and such early trees in full leaf. Much orchard planting going on, principally olives. (Nuevo)—Fruit trees promise an abundant yield. Grain is making a prodigious growth. No frost this month.

SAN JOAQUIN (Lodi)—Grain, early sown on high land, thrifty and looking well. In many fields are low spots drowned out. On adobe soil it is badly damaged by too much water. From present appearances the crop will be short fully one-half. Feed is good and all stock doing well. Almonds in full bloom. Apricots and peaches beginning to blossom.

SAN LUIS OBISPO (Arroyo Grande)—The weather through the month of February has been favorable for the finishing of seeding, also for the growth of grain. Pasture is looking well and the dairying business is better than usual at this time of the year. The prospects for good crops were never better. (Paso Robles)—No frost to speak of since the 5th. The days have been warm the greater portion of the month. Grass and grain are growing rapidly. Almond trees are in bloom and part of the Oriental plum trees. Fruit buds on other species of fruit are swelling rapidly. Rainfall for the month has been light. Ground is somewhat crusted in consequence, and a moderate rain is much needed. (San Luis Obispo)—The month of February was very favorable to vegetation. Light rains were well distributed and plenty of warm, sunshiny weather prevailed. Early grain is looking finely and is eighteen inches high in many places. There has been unusual activity in the line of plowing and seeding during the latter half of the month. The many fine showers have enabled farmers to sow a great acreage in grain, but there is still some not sown. All the gravelly and lumpy land has been plowed and sown in very fair order, but the heavy adobe has been very bad to plow. Farmers have not sown grain thick enough in this roughly plowed land, so unless we have very favorable weather, we may not expect heavy crops on adobe land excepting that which was sown very early.

Pasture is very fine, though some dairymen have overstocked their land. Our fruit prospects are very good. Very little



land has been plowed for green crops, bottom land being generally too wet. Highest and lowest temperatures, 79° and 33°. (Santa Margarita)—Farmers are still plowing, and prospects are good for a large yield of all crops, including fruit and vegetables. Live-stock is doing very well.

SANTA BARBARA (Carpenteria)—No rain, winds or frost; most of the days warm and bright. Land is in fine condition to cultivate. Farmers are improving the time to all appearances. (Los Alamos)—Weather very favorable throughout the month for both stock and cereals. Feed very fine and stock doing splendidly. One and twenty-hundredths of rain for the month, making 15.02 inches for the season. Crop prospects very flattering.

SANTA CLARA (Evergreen)—The month of February has been very pleasant. The farmers have been enabled to do a great amount of work. The crops are pretty much all in and looking very well. The orchard men are busy plowing and cultivating. (Milpitas)—Grain crops do not look very healthy yet. (San Jose)—Never has the promise of grain, grass and fruit crops been better than at this writing. Rain fell on six days in February; amount, 1.51 inches. Aside from these six days, the weather has been unusually warm and clear. Fruit blossoms and flowers are to be seen on every hand.

SANTA CRUZ (Watsonville)—Rain this month, 3.22 inches. Most crops on upland drowned. No seeding done in valley as yet. (Santa Cruz)—The weather for the month has been very fine, giving the farmers opportunity to work out of doors; hence they are well along with their spring work. But the ground remains very wet and much of the grain sown on wet ground is stunted and yellow. The prospect is good for an abundant crop of all kinds of fruits this year. (Boulder Creek)—The crops are so far in good condition and weather good.

SOLANO (Batavia)—The weather has been very beneficial for the growing crops, but is most too mild for the fruit trees, as they will bud too soon and are liable to frosts. Heavy rains would be very damaging to crops, as the ground is thoroughly soaked now. (Tremont)—Weather all that could be expected. Grain crop looking fine. Fruit prospect good, with the exception of apricots, which look short.

SONOMA (Petaluma)—The grain sown before the rains is looking remarkably well; that sown since is fast coming to the front. Some land yet to be seeded with barley. Feed is excellent. The almond, peach and apricot are in full bloom. If no damaging frosts come there will be an abundant crop. Other fruit prospects good. (Sebastopol)—Prospects for early crops very favorable. Fruit buds are swelling and almonds well in blossom. Grain on higher lands doing well, but on lowlands has suffered from wet weather. The rains of January have delayed planting to some extent. Grasses of all kinds are growing luxuriantly, the mild weather of the present month being very beneficial. All plants are doing well. Farmers are disposing considerably of last year's dried fruits. (Sonoma)—The latter part of February has been what farmers would term fine growing weather. The days have been warm, sunny, and as there has been a remarkable absence so far of the usual dry north winds, the soil is moist on top, and the genial rays of the sun are having a most beneficial effect on hay and grain fields and pasture lands. In consequence, cattle are waxing fat in the field and the outlook for a bountiful harvest of cereals in Sonoma valley was never brighter at this season of the year.

STANISLAUS (Oakdale)—The rains have so thoroughly saturated the ground that it is impossible to plow at present, but the fair weather will soon admit of work and the farmers are looking forward to a most prosperous season. (Westley)—A No. 1 prospect for a large crop. The warm weather of the past month put new life into all the growing grain. (Crows Landing)—Farmers are through seeding, and grain is showing an extraordinary growth, most of it covering the ground. The weather of this month has been very favorable. (Turlock)—The crop prospects around here are excellent. Early rye is getting too far along for this time of the year; some of it is heading out now; it is liable to be caught by the frost. On the west side of the San Joaquin, from Crows Landing south to Los Banos, the prospects were never better. On the hard lands east of Turlock the grain is drowned out in the low places.

TEHAMA (Red Bluff)—Better weather for all kinds of crops could not be desired. A good deal of plowing and seeding has been done during the past month. All orchards promise well.

TULARE (Goshen)—All crops are making fine headway. Grain is almost assured now, and with a little rain in March will make a full crop. The outlook was never better. (Lime Kiln)—The heavy rains have somewhat retarded seeding in this section; that which is in is looking well, and if the weather is favorable from now on, a good crop is assured. Feed on the surrounding hills is as good as one could wish for. We have had no frosts this month. Orchard plowing is beginning where land is not too heavy and low. Plenty of snow in the mountains, which ought to insure enough water for irrigation purposes, unless warm rain intervenes, causing snow to melt too rapidly. (Tulare)—Grain prospect was never better, also that for fruit of all kinds. If late frosts do not occur we will have the heaviest crops ever gathered, and all on account of the warm season and the abundance of rain had so far. Everything is nearly one month farther advanced than usual. Plenty of grazing for stock.

VENTURA (Ventura)—A very large acreage is in barley and wheat, which at this date promises well. Orchardists are by no means unanimous in the opinion that the prospect for a fruit crop is good, many maintaining that the heavy crop of last season, together with the lack of moisture when it was maturing, were unfavorable to perfecting fruit buds. This, of course, will not be true of many young orchards which will fruit this season for the first time. (Hueneme)—The weather has been favorable for growing crops, while we had a little east wind which has dried up the top a little, but think if we have any rain shortly everything will be O. K. (Saticoy)—With light rains early this month, followed by warm weather up to date, grains and grasses have made rapid growth. Farmers are well along with their work and soils for summer crops in excellent condition. (Fremontville)—There have been but three light frosts and vegetation is pushing along rapidly. Present indications promise a large barley crop. Large quantities of trees are being set out in this valley. On the whole, the agricultural prospects are, at present writing fairly good. (Santa Paula)—Nothing unusual to report as to crops. No damaging and very few even light frosts during the month. Most of planting of barley completed and bean land mostly prepared for the new crop. Land in great need of rain. Several periods of east winds, dry and hot, having the effect of drying up the soil and rendering more rain desirable. Oranges ripening; shipping will begin soon, probably as early as the latter part of March. Lemons showing up fine; better quality than last year.

YORO (Winters)—Grass, grain, fruit and vegetables are all in an advanced stage for this time of year. (Guinda)—Fruit outlook splendid. Almond trees full blossom.

YUBA (Marysville)—The rains early in February not being needed somewhat retarded farming operations, the ground generally being full of water. Grain that was sown earlier in the season appears to be doing well, and generally good except in low places. Almonds and apricots are in bloom, but no frosts to hurt. Fears are, however, being entertained that, owing to excessive moisture, certain varieties of peaches subject to curl leaf may be affected, but this is premature. On the whole the weather has been favorable for good crops, but only a very moderate area is sown and summer-fallowing for next season will soon be in order.

## THE FIELD.

### The Great Wheat Problem—No. 3.

California Growers Give Their Experience and Beliefs.

As promised in last week's RURAL, we continue the publication of reports from wheat growers in all parts of California concerning their experience of the cost of producing wheat and their views of the wheat situation generally. For the reports we are indebted to the California State Board of Agriculture.

#### SOLANO COUNTY.

J. B. Hoyt, Bird's Landing.—With a yield of twenty-five bushels per acre, wheat costs me \$1.10 per 100 in sacks on ranch—thirty bushels, 95½ cents. The land is valued at \$65 per acre, and should yield, in order to make wheat growing profitable at one cent per pound, thirty-five bushels per acre. A portion of Dixon, Rio Vista and Montzuma townships now yield this amount. I have fed rolled wheat to horses and mules—three sacks barley to two of wheat; to milch cows, half shorts and half wheat, and find it is excellent. At present prices I think it would be more profitable for growers to feed a large proportion of their wheat to cattle and swine if the prices do not decline.

I have just dressed thirteen pigs that were fed on rolled wheat. They were a cross between pure Berkshire and Poland-China. Their age varied from eight to twelve months old. The last three months they were fed entirely on wheat, the thirteen eating ten sacks of rolled wheat in eight days. The eight-months-old dressed 225 to 240 pounds; the twelve-months-old dressed 340 to 380 pounds.

This is the first time I ever fed wheat, and is the greatest gain in weight ever had on this ranch. I am slopping milch cows with wheat and shorts and they are doing finely.

Our soil is adobe loam, not of the black character. It costs me \$1.35 per ton to deliver wheat at Port Costa from the ranch. The last two seasons we have averaged from thirty-five to thirty-eight bushels per acre—some as high as fifty bushels. Twenty-five bushels would be a short crop in the Montzuma hills.

E. C. Dozier, Rio Vista.—Have had considerable experience in the use of wheat as feed for animals, and find it excellent to fatten swine. When used alone for work horses it is heating, but is a good strong feed when mixed with barley. In my opinion, it would be more profitable for growers to feed a large proportion of their wheat to stock, and market cattle and swine thus fattened, providing large abattoirs are established in the State to insure a good market.

Land should yield thirty-five bushels per acre to make wheat growing profitable at one cent per pound in this county. A portion of the Montzuma hills now produces that amount.

At a yield of twenty-five bushels per acre, the cost per bushel, including interest on value of land, is forty-five cents.

#### MENDOCINO COUNTY.

John Merchinney, Pomo.—It costs me to raise 10 bushels wheat per acre 85 cents per bushel; 15 bushels, 65 cents; 20 bushels, 55 cents; and 25 bushels, 51 cents, the present value of land being from \$30 to \$70 per acre.

With a yield of thirty bushels per acre, wheat could be raised profitably in this county at one cent per pound. I should estimate that one-fourth of the wheat land now yields the above amount.

Wheat fed in sheaf or in stack is excellent for swine, but not for horses or cattle. I would suggest government ownership of railroads run in the interest of the people; also free coinage of silver. Stop tariff tinkering and the Government to loan money to the producers at whatever the increase of the wealth in the country is. It is time for the Government to come in between the skinned and the skinner. The Government and the people want to come together and do for the whole, not Wall street alone.

H. C. Waugh, Palmage.—Taking twenty bushels per acre (any less will not pay here with land valued at \$50 per acre), wheat costs me, per bushel, in the sack, including interest upon value of land at seven per cent, very near 50 cents.

Probably one-half of the wheat land in this county now produces thirty bushels per acre, which would be necessary to make wheat growing profitable at one cent per pound. Land that will produce thirty bushels per acre cannot be purchased for less than \$100.

With hogs at four cents per pound, it would be better to let them harvest the wheat. If the hogs are well grown to start with, there is more money in it.

Our greatest drawback, in my opinion, is due to the railroad company. For instance, we have to pay \$3.25 per ton, or \$32.50 per carload, on wheat to Petaluma—our best market. We have reasons to believe that they bring hay and other products from Petaluma and San Francisco for \$17 or \$18 per carload.

J. Scott Ryder, Potter Valley.—I am of the opinion that it pays to feed wheat to work animals, and

cracked wheat to milch cows. It is profitable to feed wheat to swine and cattle when they can be sold for four and one-half or five cents. Farmers in this county have raised wheat, hogs and cattle at a loss this year, and it is generally conceded that it does not pay the farmer to market his wheat at one cent per pound.

With wheat at 81c. to \$1.07, hogs at 3½c. and cattle at 4c., it will not pay growers to feed a large proportion of their wheat to cattle and swine. I have had experience in the use of wheat as feed for animals, and see no reason why it should not be used alone or mixed with other grains, with good results.

Wheat costs me per bushel in the sack, including interest, etc., as follows:

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| 10 bushels per acre, \$1.04 per bu. | 25 bushels per acre, \$ .47 per bu. |
| 15 " " " .73 " "                    | 30 " " " .41 " "                    |
| 20 " " " .57 " "                    |                                     |

The present value of land upon which wheat is produced at above cost is \$50 per acre. About one-tenth of the wheat land in this county now yields twenty-five bushels per acre, which is necessary to make the growing of wheat profitable at one cent per pound.

John Crawford, Largo.—Wheat costs me forty-three cents per bushel, which includes seven per cent interest on value of land, etc. Land upon which wheat can be produced at above cost is valued at \$30 per acre, and should yield thirty bushels to make wheat-growing fairly profitable in this county at one cent per pound. I should judge that one-fifth now produces the above amount.

I have had experience in the use of wheat as feed for animals and find it first-class, but I do not think it would be profitable for growers to feed a large proportion, as we have not the market for our stock.

Thomas B. Henley, Corcoran.—This locality is sixty miles from a railroad, consequently no grain is sent to the city market. There is a local flouring mill, which manufactures all the flour consumed here.

Fifteen bushels per acre would make wheat-growing in this county fairly profitable, while the average yield is about twenty bushels per acre.

My experience proves that wheat makes good feed for horses, hogs and poultry.

#### SONOMA COUNTY.

E. W. Davis, Santa Rosa.—Wheat costs me, per bushel, in the sack, including seven per cent interest upon value of land, as follows:

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| 10 bushels per acre, \$ .65 per bu. | 25 bushels per acre, \$ .57 per bu. |
| 15 " " " .63 " "                    | 30 " " " .55 " "                    |
| 20 " " " .60 " "                    |                                     |

The present price of land will average \$70 per acre; and in order to make wheat growing fairly profitable at once cent per pound, the land should produce from twenty-three to twenty-five bushels per acre, but not more than ten per cent of the land in this county now yields this amount.

I have had successful experience in the use of wheat as feed for animals, and there are many good reasons why it should be so used. Without any doubt, at present prices, it would be more profitable for growers to feed a large proportion of their wheat and market cattle and swine thus fattened.

In order to insure the grower warranted returns, less wheat must be produced and more fed, the best only to be used for milling, as much inferior wheat is mixed with flour. Let farmers everywhere go more into mixed farming. Feed more live-stock and poultry. Let them consume more of their own products and less of foreign and domestic canned goods. The live-stock of the United States ought to be marketed in preserved form in almost every country on earth. Our skill in preparing, as well as producing, ought to put us at the head of all the countries as sellers; therefore, at the bottom of the list as buyers. American agriculture will have to be more profitable or all its votaries will perish.

Robert Crane, Santa Rosa.—I have had some experience in feeding wheat to swine, and find it is more profitable to sell wheat at one cent per pound than to feed it to swine, unless five or six cents per pound can be realized from the sale thereof. The most profitable feeding of wheat in this county is to poultry, which will give good returns.

Wheat costs me per bushel in the sack, including seven per cent interest on value of land upon which raised, etc., as follows:

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| 10 bushels per acre, \$ .90 per bu. | 25 bushels per acre, \$ .66 per bu. |
| 15 " " " .78 " "                    | 30 " " " .60 " "                    |
| 20 " " " .72 " "                    |                                     |

From \$30 to \$75 per acre is the present value of land upon which wheat is produced at cost named above.

Land in this county should yield sixty bushels per acre to make wheat-growing profitable at one cent per pound, but only a small proportion now yields this amount.

#### NAPA COUNTY.

J. R. L. Hardin, Pope Valley.—My average yield per acre is twenty-five bushels, which costs me, including interest, etc., about forty-eight cents per bushel, upon land the present value of which is \$50 per acre.

Land in this county should produce twenty-five bushels per acre, to make wheat-growing fairly profitable, and I believe the whole county of Napa now yields this amount.

I have had experience in feeding wheat to swine,



which should bring very close to five cents per pound to make it profitable with wheat at one cent per pound. At present prices I do not think it would pay growers to feed a large proportion of their wheat and market cattle and swine thus fattened, as stock is cheap in proportion to grain.

I believe I am now feeding hogs at a loss, unless price advances. What wheat I disposed of at home came out a little ahead, but I lost on that shipped.

From observation I have come to the conclusion that the only prosperous farmers at present are those on small places of from 60 to 200 acres, according to fertility. The large farms require much hired help, there always being more or less loose ends and incompetent men, which means needless waste, wear and tear.

I believe a live man on a place where he can do nearly all the work himself and raise a variety of products, stock and poultry, can make money at present prices, especially if he produces what he can find a home market for. On the other hand, I believe the large farms that are not close to market are sure to become bankrupt, unless prices go to something like \$1.25 per cwt.

*J. R. Johnson, Monticello.*—If the yield of wheat is twenty-five bushels per acre, it costs me fifty-five cents per bushel at Port Costa. The present price of land upon which wheat is produced at above cost is \$50 per acre. From this part of the county land should yield thirty bushels per acre to make wheat growing profitable at one cent per pound. A very small proportion now yields this amount, as it is mostly all winter sown.

I have fed wheat to hogs with satisfactory results. I weighed wheat fed, and when hogs were sold found my wheat brought one and one-quarter cents per pound. Have had no experience with cattle. Feeding wheat to hogs this season has been profitable, but in all probability it will be overdone another season.

The wheat-grower must have relief or he cannot hold out with such odds against him. There must be a cheapening in the cost of production, and that means a reduction in the wages of hired help. We must also have cheaper transportation, also more economy practiced in the management of the government, both nation, State and county, so as to lessen the burden of taxation. We must be fully protected from combines, trusts and rings which are organized for the purpose of making the farmer pay whatever price they may ask. Money must be had at cheaper rates of interest; and, last of all, the California farmers must practice more economy than they have done, and look closer after the small details of the farm.

(To be Continued.)

## HORTICULTURE.

### Grafting-Over Fruit Trees.

Probably no single subject is more timely or likely to meet the interest of our fruit growing readers than a discussion of grafting-over bearing trees to sorts thought to be more profitable or desirable for other reasons. Recently we gave the declaration of a Sonoma county orchardist on the feasibility of grafting-over Bartlett pears to apples. Several of our readers gave contrary experience. The Sonoma man replies to them through the *Tribune* of last week, and gives besides some very interesting suggestions on grafting methods which we believe, all will be glad to read. We therefore reproduce his letter and invite further comments on the points advanced.

*Apples on Pear Stock.*—Those who have found the Bartlett pear unsatisfactory, as it has proved in the past year when sold in a green state, would gladly change to apples, which have commanded better prices. If we can graft our Bartletts to apples it will be a great gain. The little done in that line in this locality is not conclusive, but it is encouraging and justifies further trial.

Several articles in different horticultural journals lately speak of partial failures in grafting the apple to the pear, but it is likely the grafters made the mistake the writer did years ago, viz: They put their scions in too large stocks, frequently cutting off limbs two or three inches in diameter. Such scions will grow in large stocks as well as small, but it takes the large stock so long to grow over that it is sure to get blown out. If grafters would confine their operations to limbs from three-quarters of an inch to an inch and a quarter in diameter there would be far less danger of their blowing out, and they would grow over the stump by the second year frequently the first.

As to the union of the graft with the stock we have been unable to see anything wrong in hundreds of the examinations, but no doubt there are occasional defective unions. We shall find out as we go along which kinds grow together best, as well as many other things yet unknown. The writer does not assert that it is a complete success, but he will not admit that it is a failure until further trial proves it. We would like all fruit growers to experiment in this matter and publish their results.

*How to Graft.*—Each grafter has some peculiar

methods of his own and can do the best work by following them, but there are beginners to whom a timely hint will be of service.

In this locality begin early, say the first of February. In grafting trees eight years old or younger cut off all the limbs, putting grafts in about six of the best. If older trees take half off or less, and the remainder the following spring. For very old trees do the work in from three to five years. A man who has a liking for the work will soon learn what limbs to graft.

Never do the work in a hurry, neither task yourself, else a bad piece of work will be made of it. Wait till the trees dry off before you commence, and if the wind blows up cold and chilly, quit and do something else. Finish a tree before you leave it.

*Grafting Wax.*—Learn to make your own grafting wax. The writer uses the following recipe:

Take four pounds rosin, one pound beeswax, one-half pint raw linseed oil; melt together in an iron pot and stir well. When melted pour into a vessel of cold water, and work well with the hands.

If the wax is found to be too hard melt again, adding a little more oil; if too soft, a little more beeswax. There is a great difference in the quality of rosin and beeswax, and you cannot always get a good wax by following this or any other formula strictly; hence you must keep trying until you get it right, even if it takes half a dozen meltings.

In waxing your grafts use a brush, or a paddle if you prefer, but that requires a lamp of some kind. The writer prefers to put it on with the fingers. A neater job, with less wax and in less time, can be done in this way. A glue kettle is a good thing in which to keep your wax melted.

It is a good idea to work about half a pound of Spanish whiting into every five pounds of wax after you have it melted and worked, as it prevents sticking, and the hot sun is not so apt to soften it, but it is necessary to keep a lump of tallow in your kit to grease your hands occasionally.

*Other Hints.*—As the scions are growing watch them closely all the season, taking off all sprouts and limbs not wanted as they appear. Frequently they will need pinching back and shortening, and if you do that often and well they will not need much cutting back the following winter. In fact, summer pinching and sprout pruning almost does away with winter pruning, and throws the growth of your trees where you want it. This has been the writer's actual experience. There is no guesswork about it. We venture to say that if any careful man will give the plan a thorough trial he will come to the same conclusion.

There is much in having good, safe step-ladders, good saws and other tools, and keeping them sharp and clean. The thoughtful man will always provide good tools and appliances and take good care of them.

In cutting scions take well-ripened wood of the last year's growth and cut not more than two or three from the lower end of any one twig. We have always had the best success with scions one-half an inch in diameter, though frequently using them larger. Instead of splitting, the writer uses a small rip saw and kept in line order.

The walnut can be grafted as easily and surely as any other tree. Take the little fruit spurs, about two or three inches long, for scions and don't cut off the terminal bud; if you do they will not grow.

## FLORIST AND GARDENER.

### Winter Squashes.

TO THE EDITOR:—In my judgment, the genuine Hubbard squash, as it was first introduced by Jas. J. H. Gregory, seedsman, of Marblehead, Mass., was much superior to any grown for table use. In fact, I do not believe that there has been as good a one originated since. It has, however, like many other vegetables, deteriorated to such an extent that it is very difficult, if not almost impossible, to find it now in its original purity. I have never been successful in raising it here profitably for the following reasons: It is exceedingly tender when young—in fact, when it is over half grown, so much so that the black squash bugs swarm on them and destroy a great many. Those that escape the ravages of these destructive bugs are very badly injured by sunburn early in September, when the vines commence to die, exposing the squashes to the sun when the temperature is often as high as 100° in the shade.

In the summer of 1891 I succeeded in crossing the "Hubbard" with the "Sibley," and have originated one with an extremely hard, flinty shell when fully matured, and so hard when young that the bugs do not destroy a single one, and I have never seen any damaged by sunburn. When stored in the barn the ravenous rats try to destroy them, but find they have hard cases to deal with.

They are much larger than the Sibley, often weighing from fifteen to twenty pounds, and while I do not claim that they are all as good as the original Hubbard, I do claim that some of them are, and that they are a valuable acquisition to the squash family,

and especially for farmers to raise who live in the hot interior counties of this State, as they are not only a fine table squash, but are most excellent for stock of all kinds, as they are certainly much more nutritious than the larger variety and are exceedingly prolific.

Another thing in their favor is their long keeping qualities. I picked my squashes the last of September and put two of them on the gravel in my back yard, entirely exposed to the weather. Up to February 1st over forty-five inches of rain had fallen on them and the mercury was down twice in January to 28° above zero and many times to 32°. Ice formed in my barrels several times as thick as common window glass. Notwithstanding all this exposure, I found these squashes to be perfectly sound up to February 1st. I cut both of them to-day, Feb. 22d, and with the exception of a small spot on each about as large as a nickel (evidently being a bruise made by a small stone as my little boy rolled them over occasionally), they were as sound as when put there. I am now selling squashes in town, also to a peddler, who, strange to say, finds good sale for them in Lake county. I sell these squashes, after selecting the choicest ones for table use, at five dollars a ton in the field, and always keep plenty of them to feed my cow and horse, and don't take out the seeds. Many persons say "the seeds must always be taken out, as they will soon dry a cow up." I beg leave to differ. I have learned by close observation that because people say so (in relation to any matter) don't make it so, and that I have to unlearn many things I was taught in my younger days. I notice that my cow and horse thoroughly digest the squash seeds and there certainly is a good amount of nutriment in them as well as in the pulp, and my cow gives as much milk or more than she did when I was foolish enough to scrape them out. I do not claim that the type of my squash is entirely fixed. It probably never will be. Neither do I claim that it will not "sport" to a greater or less degree; most, if not all, varieties will. I take pains, however, to save seed from the best specimens, in order, if possible, to improve them. In view of the foregoing, and for want of a better name, I have concluded to name this squash Adams' Hybrid.

### POLE BEANS.

It is almost impossible to raise bush beans here without irrigation, and then they do not generally produce enough to satisfy me. Accordingly, I sent East last season for several varieties of pole beans, in order, if possible, to find one that would give me entire satisfaction. One of these, "Old Homestead," filled the bill. They are enormously productive, the pods, from eight to ten inches in length, hanging in great clusters from top to bottom of the pole. It is entirely stringless when young, and nearly so when the beans are almost matured. At this stage, when the pods are broken in short pieces, a few strings have to be taken out; by cooking a little longer than usual the pods are very tender and melting. They begin to blossom soon after the vine commences to run, and continue blooming and bearing a long time if irrigated and otherwise well cared for. I always keep the beans closely picked. By so doing they will continue in bearing much longer. The foliage is exceptionally stout and healthy, and the vines take to the poles very readily. I do not recommend them as a shell bean, as there are so many other kinds which are superior.

I learned last season, by experimenting, that bush or pole beans would transplant better than cabbage. As my ground was too cold and wet to plow any time in April, I planted early in the month thirty hills of my pole beans in fine creek sand, putting four beans in a hill, eyes down. This sand was in a large shallow box in order to keep the industrious gopher from spoiling my original experiment. I kept the box covered at night, as well as during rainstorms. They soon came up nicely, and on May 5th I transplanted them. They were then over six inches high. I watered them only once—on the evening they were set out. They never showed the least sign of wilting, but commenced in a few days to grow vigorously, and on July 19th I picked my first mess. This season I shall plant eight or ten hills in the manner before stated on April 1st, and make at least two more plantings later—two or three weeks apart in the open ground. By so doing I will have string beans until frost. I shall also plant about twenty-five hills of Burpee's bush lima beans, and transplant them when the weather gets warm. Many of my friends have told me that they never have any success with the lima bean, bush or pole; that most of them rot. By planting them in sand, eyes down, and giving them a little protection, they can be easily transplanted when the proper time arrives, and they will prove a success. Of course this manner of planting and transplanting beans would only be advisable on a small scale, in order to get *early* ones for family use. Eight or ten hills of the "Old Homestead" bean will supply a large family for some weeks.

### WINTER PINEAPPLE MUSKMELON.

I am still raising this valuable melon and selling the seed to several prominent Eastern seedsmen, although the melon does not seem to flourish outside of the Southern States. There is always some de-



mand for them here in the winter months, especially at Christmas and New Years. I have never raised anything that will fatten a hog as fast as this variety of melon, and they make most excellent feed for hens. They will keep outdoors, unprotected, nearly as long as my hybrid squash. They are easily raised and harvested, and a vast amount can be raised on one acre.  
IRA W. ADAMS.

Bay State Garden, Calistoga, Cal., Feb. 22, 1895.

## THE DAIRY.

### Private Versus Public Tests for Yield of Butter.

TO THE EDITOR:—I see that Mr. E. Steele, in his paper (RURAL PRESS, Jan. 5, 1895) read before the recent Dairymen's Convention in San Francisco, with commendable enthusiasm quotes instances of some extraordinary annual yields of butter from certain cows, which he names. Amongst them the Jersey cow Signal's Lily Flagg is mentioned as having the second largest of these to her credit, viz.: 1047 pounds of butter, on a ration of thirty pounds of grain a day. Now, it so happens that this cow was among the fifty Jerseys that were, at much pains and cost, selected for being kept at Jackson Park, four months before the commencement of the dairy tests at the World's Fair, from which fifty cows the requisite number of twenty-five might be selected and trained for the coming contest.

Unfortunately for the reliability of those immense yields of butter, which have occasionally surprised the whole world of dairymen—at least those of them who were willing to believe such reports—the above-named "Queen" of the Jerseys, and also the "ex-Queen," Eurotissima, were both left out in the cold, in fact rejected, as unfit candidates for competition amongst the twenty-five cows finally selected for the great public tests. The consequence was that both the above-named champions of the private test records were publicly placed on a lower plane, in the scale of dairy products, than the lowest of the twenty-five Jersey cows, that cow being Annice Magnet, in the ninety-day butter test, during which time her product was 2064 pounds of milk, yielding 119 pounds of credited butter, being an average of 1.32 pound a day. With better records in the second test were twenty-one out of the twenty-five

Guernseys, and eighteen out of a total of twenty-four Shorthorn cows.

In connection with this it will be as well to give also the yields of the two best Jerseys in the same test, viz., Brown Bessie, with her product of 216.66 pounds of butter, an average of 2.40 pounds a day, and 16.80 pounds a week, her greatest yield for any one day being 3.48 pounds of butter. The next best cow was Merry Maiden, with 200.54 pounds in ninety days, a daily average of 2.27 pounds, and 15.90 pounds a week. Now, it will be admitted by all who know the circumstances under which the Jerseys were selected for the above-named test, that no stone was left unturned, by those interested in the breed, to get together the best cows that could be had for the purpose. I say this for their credit, and had those who were working in the interests of the other two breeds gone to the same expense and trouble in selecting their cows, they would have made better records than they did for the credit of the respective breeds.

The great butter records, such as Mr. Steele refers to, even if they were true, which few people believe them to be, are not what the dairyman wants in practice; therefore the publication of such is of no public benefit, compared with facts that may be proved through the aid of experiments carried on in a common-sense, practical manner, such as can be put to daily use by the dairyman who is endeavoring to improve his herd of cows, and at the same time his methods of feeding and general management in such a way as to insure greater economy in the production of milk and butter. This ought to be the aim of every dairyman and is what we must depend on to make the business profitable, rather than the looking forward to the higher prices which may not come, except through the production of an article which will command the top of the market—something that will be sought after. As to the phenomenal yields of the "Jersey Queens," they may be all right. I am not disputing them, but merely refer to facts as produced under public supervision. We all know that cows vary more or less from year to year in the quantity of their produce, and perhaps the year 1893 was an "off year" with them; a long way "off" indeed, when they did not prove to be as good as the cow that made an average of less than one and one-third pound of butter a day for ninety days. Then, to the best of my knowledge, there has never been quite a satisfactory explanation as to why the Holstein breeders withdrew from the contest at the World's Fair, seeing that they claim for cows of that breed the production of the greatest quantity of butter in any one year. It

looks as if they had not faith enough in the merits of the breed to submit their choicest specimens to a public trial in competition with the Jerseys. Why did they not prove their faith in the breed by their works? That is what a good many people are still wanting to know.  
ROBERT ASHBURNER.

Baden, San Mateo Co.

### Lack of Organized Force.

Congressman Hainer, of Nebraska, in a very pertinent speech before the National Dairy Union, at Washington, said that he had learned one thing in Congress, and that was that there was almost a total lack of organization among the dairymen of the United States in favor of laws against adulteration of dairy products. What a comment that is upon the citizenship of dairymen. Ask any man among them if he is in favor of such laws and he will answer yes. Ask him if he has done anything practical to impress his opinion on the lawmakers, whether in Congress or his own State, and not one in a thousand will answer yes.

No wonder that Congressmen will fight the Grout bill or any other bill that interferes with their friends, the oleo combine. It is because the oleo combine is organized and the dairymen are not. It is because the oleo men will spend thousands upon thousands of dollars to destroy the dairy interest, while the dairymen stand indifferent. The oleo men are practical; the dairymen are impractical. The oleo men hire lobbyists by the score to block the progress of all legislation against them. Will the dairymen pay the sum of one dollar to help the National Dairy Union?

There are three simple ways for every dairyman to make himself effective:

1. He should write a postal card to his member of Congress and to each of the Senators of his State, asking them to support the Grout bill. Ask them to defend you against a fraud and counterfeit.

2. Also write a postal card to your member of the State Assembly and Senate, calling for State laws against the fraud. It is the number of atoms in this postal card snow storm that will tell. Every farmer can add to its weight. Don't fail to do it.

3. Send the small sum of one dollar to the National Dairy union to help make up the sinews of war in this fight. Do this all over the land and the butter counterfeiters will hear something drop inside the next ninety days. The president is Hon. W. D. Hoard, Fort Atkinson, Wisconsin.

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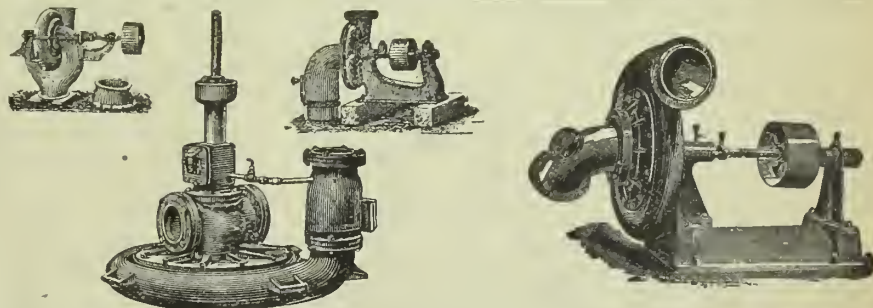
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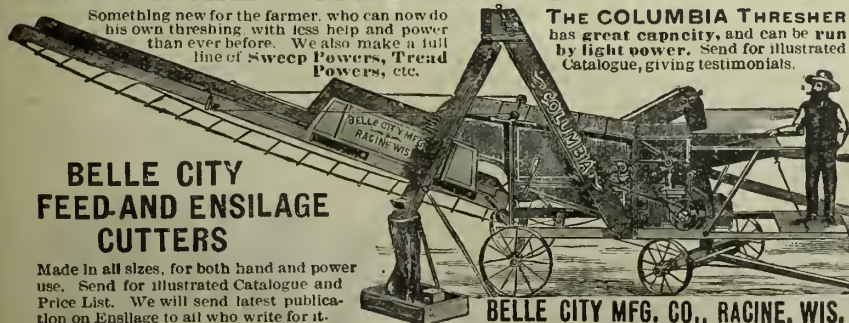
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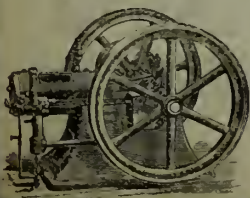
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## THE HOME CIRCLE.

## Always a River to Cross.

There's always a river to cross,  
Always an effort to make,  
If there's anything good to win  
Any rich prizes to take.  
Yonder's the fruit we crave,  
Yonder's the charming scene;  
But deep and wide with a troubled tide  
Is the river that lies between.

For the treasures of precious worth  
We must patiently dig and dive;  
For the places we long to fill  
We must push and struggle and strive;  
And always and everywhere  
We'll find in our onward course  
Thorns for the feet and trials to meet  
And a difficult river to cross.

The rougher the way that we take,  
The stouter the heart and nerve;  
The stones in our path we break,  
Nor e'er from our impulse swerve.  
For the glory we hope to win  
Our labors we count no loss;  
'Tis folly to pause and murmur because  
Of the river we have to cross.

So, ready to do and dare,  
Should we in our places stand,  
Fulfilling the Master's will,  
Fulfilling the soul's demand,  
For, though as the mountain high,  
The billows may rear and toss,  
They'll not overwhelm if the Lord's at the helm  
When the difficult river we cross.

## How the Mortgage Was Paid.

"Worm or beetle, drouth or tempest  
On a farmer's land may fall,  
But for first-class ruination  
Trust a mortgage 'gainst them all."

Nellie Gordon kept repeating this to herself again and again as, one morning in early May, she sat on the doorstep of a farmhouse dear to her because it was home—the only one that she had ever known. It seemed dearer to her now than ever before, for while she was sitting by the bedside of her sick father he had told her that there was a mortgage on their farm, due in October, and unless he could pay it off their pleasant home would have to be sold. Nellie had kept back the tears in her father's room, but she was now indulging in a good cry. When her sister Rose saw this, she said: "Why, Nellie! What's the matter?"

"Matter enough," replied Nellie, and then she told Rose the whole story.

"Oh, dear!" sighed Rose, "it's dreadful to be so poor. But I'm not going to be so always. I'll marry a rich man and then I'll make the money fly."

"The dickens! Rose," exclaimed Tom Gordon, who had been listening to their conversation, "you don't suppose anybody would have you, do you?" Rose was too angry to make any reply, and Tom continued: "Now, really, Rose, I pity the fellow that gets you from the bottom of my heart."

"Why, pray tell?" asked Rose, her black eyes glittering.

"Because," said Tom very slowly, "if you'd take your tantrums very often you'd soon snatch the poor fellow baldheaded; and then it would be, 'On his head where the wool ought to grow.'"

"Tom—Tom Gordon!"

"That's my name, I believe."

"Here I have been trying for fifteen years to make a half decent boy out of you, and this is my reward."

"Well, Rose, it's always been a great mystery to me how a person could live with you that length of time and not be a saint."

Tom replied in such a comical way that Nellie could scarcely keep from laughing. As Rose did not care to hear any more, she went into the house, leaving Tom and Nellie to talk over the different things that they might do to help their father. First one thing and then another was discussed.

While they were talking Mrs. Hill, the merchant's wife, drove into the yard, and Tom went to the field to work.

In the course of her conversation with Nellie, Mrs. Hill said: "The hot weather is almost upon us and I am very much afraid I shall not be able to get anyone to do my baking this summer. You perhaps know that several families have been in the habit of having their bread, pies, cakes, puddings and such things baked by Mrs. Hardin during the hot summer months. As

she has moved away, we are puzzled to know what to do. Of course we could get these things from the baker, but for my part I prefer having them furnished by a private party. Can you suggest any one that you think would do it?"

"Oh, Mrs. Hill!" exclaimed Nellie excitedly, "can you would you be willing to let me try?"

"You dear, good girl! Of course we'll be willing to let you try it. I know that the other ladies will be delighted when I tell them that you are to do our baking, for we know you will do it well."

After Mrs. Hill went away, Nellie went to tell Tom the good news. He was busily engaged in trimming berry briars, and before she had time to say anything, he exclaimed, "O Nell! there's going to be an immense crop of berries, and I most know I can make lots of money out of them. So you see I've got a way to make at least part of that mortgage money."

"So have I," said Nellie very quietly, and then proceeded to tell her story. Tom had never had much faith in girls, and for an instant he was dumfounded, but after drawing a long breath he managed to say, "Well, Nell, you're a trump, and no mistake about it."

As they were talking over their plans, Tom suddenly exclaimed, "Oh, say! Let's not tell a single person about our plans, not even father. You know his birthday is on the same day that the mortgage is due, and we'll give the money to him as a present."

"I am glad you thought of that, Tom, for it will be so much nicer to surprise him." Nellie soon banished both her mother and Rose from the kitchen, and then she had it all her own way. One day Rose happened into the kitchen just as Nellie was taking some pies from the oven. "Oh, dear," she said, "such loads and loads of stuff. It's no wonder we're in debt. You could run our farm through the oven in a year. Father said some time ago that we would have to economize somewhere, and he thought we would better begin with the groceries. Our grocery bills are getting larger and larger all the time. Nellie, do try to be more saving." Nellie was too busy to reply, and Rose went back to her room. Here she had spent all of her spare time lately, and although she had made no reply, when asked what she was doing, the ink stains on her fingers told the whole story.

One morning when Rose came down stairs ready to go to the village, she had a large package in her hand. This, she gave the family to understand, was a story which she was going to send to a magazine. The next morning, when the editor of a certain magazine was looking over his morning mail, he came across Rose's manuscript. He frowned a little when he saw its size, for there were about one hundred pages of dainty perfumed paper, and the writing was so fine that, after reading a few flowery expressions here and there, he laid it down in disgust. "Humph!" he growled, "my readers don't want such sickening stuff as that, so here goes," and over the edge of the desk went the ill-fated manuscript, into the dreadful waste basket. The editor opened another envelope and found that it contained a story also. But it was not a long one, for it occupied but fifteen pages. The story was well told, and after reading it very carefully, the editor laid it back upon the desk among the chosen few. Rose received the next copy of her magazine at the usual time, and was looking over the contents when Tom came into the room.

"It's no use," he said, "Your story isn't there. I looked when I was coming home. But here's a good story," and, taking the magazine, he pointed to a children's story by "Nell." Rose was too angry to pay any attention to this, and Tom laid the magazine back upon the table, saying, "I got a letter for Nell and she acted so queer about it. As soon as I gave it to her she ran away with it and I haven't seen her since."

"Yes, and here's a letter for you,

too," and Tom handed her a letter that bore a Florida postmark. It was from Richard Newell, a wealthy southerner whom she had met the previous winter while visiting at the house of a friend in the city. They had kept up a regular correspondence at first, but Rose's last letter had remained unanswered so long that she had given up all hopes of ever hearing from him again. He gave no reason for having been silent so long, but merely told her that he was coming north in October, and, if convenient, he would spend a few days with her.

"I will not tell any one that he is coming," said Rose to herself, as she put the letter back in the envelope. "It will be a surprise to them all."

The day before Rose was expecting Richard Newell Tom was picking grapes, when a stranger suddenly appeared before him. He began talking very pleasantly, and made himself so agreeable that Tom gave him an invitation to help himself to grapes. This he gladly accepted.

"Have you any sisters?" the stranger asked.

"Yes, sir, two of them," replied Tom, thinking at the same time that the stranger was very inquisitive.

"Will you describe them?"

Tom helped himself to another bunch of grapes and then said: "There's Rose, a mighty big-feeling thing she is, too. I reckon if we had a little more money you couldn't touch her with a ten-foot pole. She's got hair as black as a raven's wing, and black eyes, too. Her eyes just flash like coals of fire when she's mad, and that's pretty often. After she came home from school she took it into her head that the old house would have to be fixed up, so father had to mortgage the farm to get the money to do it. I tell you, if she ever marries that southerner the niggers'll have to stand around. Blamed if I haven't forgotten what his name is. Seems to me its New—something."

"Newell," suggested the stranger.

"Yes, that's it. Queer you thought of it. Now I'll describe Nell. Picture to yourself a girl with brown hair, blue eyes and the best disposition in the world and you've got Nell exactly."

The stranger made no reply to this, but said that he must be going. But he only went around to the front door, for of course the reader has already guessed that this stranger is none other than Richard Newell.

When Tom came in from picking grapes, Nellie exclaimed: "Oh, Tom! guess who's here?"

"No use to try," replied Tom.

"It's Richard Newell," said Nellie, and then she told Tom all about his coming, how Rose had been expecting him for so long and had kept it from them. Tom was puzzled to know what to do, for he knew from Nellie's description of their visitor that the stranger was Richard Newell. Finally he said: "By George! Nell, I've done it. Seems like I'm always getting into scrapes," and then he told Nellie all that he had told Richard Newell under the grapevines. To Tom's immense relief, Nellie did not say a word, but gave a merry laugh.

During the next few days Rose kept Richard by her side the greater part of the time, but in spite of all her managing, he was often alone with Nellie. When Rose saw the turn in affairs she began to show her real disposition, and Richard wondered that he had ever fancied her.

The time was drawing near when the mortgage money must be paid, or the mortgage would be foreclosed. Mr. Gordon's face wore a sad and troubled look, for every nook and corner of the old homestead was very dear to him. It puzzled him to know how Nellie and Tom could be so gay when there was such a dark cloud hanging over them. They did not seem to care in the least, for Nellie sang about her work as usual, and Tom whistled as merrily as ever. The day came, as all days will, and that evening, while Mr. Gordon was sitting on the porch, Nellie came to him and placed a package in his hands, saying, "A birthday present for you, father. It is Tom's and mine."

When Mr. Gordon saw the contents of the package, he asked Nellie to explain matters.

"Well, you see," Nellie began, "the ladies have been patronizing me instead of the baker this summer, and the consequence is I have made about \$250 in this way. Then Tom made more than \$100 from the fruit and other things; but that is not all." Here Nellie hesitated a little before she added, "I have been writing stories."

"You!" Rose exclaimed, "you been writing stories?"

"I think I see how it is," said Tom; "you are the Nell of the *Household Magazine*."

"Yes, I am," admitted Nell. "When I sent my first story, they wrote me such a nice letter urging me to write again, I did so, and was well paid for it."

"I can never thank you for what you have done," said Mr. Gordon, his tears falling like rain.

The next day Richard Newell started for home, but before going he won from Nellie the promise that when next he came he would not return alone. When Tom heard of this he was almost wild with delight and immediately went in search of Rose to tell her the news. But Rose was not to be found anywhere, for she already knew that Nellie was Richard's promised wife and was shut up in her room, where she stayed until Richard had gone.

It was just before the first winter snow fell that Richard again came north, and when he went back he took with him Nellie, his bride, to his home in the far-off south land. Tom soon followed them, declaring life at home unbearable. He is so much in love with the south that his visits to his northern home are few and far between. Rose is not there now, for not long ago she in a fit of desperation accepted a wealthy bachelor of 45. Tom will add further that "she married his gold and had to take the old man in the bargain."—Bertha H. Corn.

## The United States Twenty-Five Years Ago.

In 1870 the United States covered the same tract of the earth's surface as now, amounting to four million square miles. Hardly more than a fifth of this represented the United States in 1789. About a third of the vast domain was settled, the western frontier running irregularly parallel with the Mississippi, but nearer to the stream than to the Rocky mountains. The center of population was forty-eight miles east by north of Cincinnati, having moved westward forty-two miles since 1860. Except certain well-peopled sections on the Pacific slope, and little civilized strips in Utah, Colorado and New Mexico, the Great West had but a tenuous white population. Over immense regions it was still an Indian fastness, rejoicing in a reputation, which few could verify, of rare scenery, fertile valleys, rich mines and a wondrous climate.

The American people numbered 38,558,371 souls. In the settled parts of our country the population had a density of 30.3 persons to the square

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40 YEARS THE STANDARD.



mile, southern New England being the most closely peopled. Much of western Pennsylvania was in the condition of the newest States, railroads building as never before, population increasing at a remarkable rate, and industries developing on every hand. Petroleum, which before the Civil War had been skimmed off the streams of the oil region and sold for medicine, in 1870 developed a yield of over five million gallons in Pennsylvania alone, more than ten times as much as a decade previous. The West was rapidly recruiting itself from the East, the city from the country. Between 1790 and 1860 our urban population had increased from one in thirty to one in six; in 1870 more than one in five dwelt in cities.—E. Benj. Andrews.

### Fashion Notes.

White opera flannel, cashmere, serge and broadcloth are used for entire suits.

There is a craze for red-and-black plaids, or perhaps they should be call-checks, as they are not in any degree related to the clan plaids.

Summer silks show the creped effect which had come to be a reigning feature of all dress goods, and are either crinkled in stripes of various widths or all over.

Diagonal materials of both plain and mixed colors, and in great variety as to the width of the diagonal, are to be worn for spring gowns, and woolen goods, in canvas and basket effects, are to be made up in tailor dresses.

The profuse use of chiffon will continue throughout the next season, not only for neck wear and waists, but also for draping skirts—not merely the skirts of evening dresses, but of those worn in the day time and out of doors.

Round waists will continue in favor through the coming season, except, perhaps, for stout women, to whom they are not very becoming, and all sorts of beaded yokes, spangled and finished on the edge with jet cabochons, are used for their decoration.

A simple and stylish bodice can be made of soft silk fulled into the belt back and front. The neck is cut low and well off from the shoulders in the Victorian style, and is edged with a bertha of lace. A band of ribbon extends from under each arm to the shoulders, where it forms a rosette.

There are several varieties of ribbed woollens that are highly favored, especially those that have diagonal ribs meeting in points, besides a number of rough, coarse-looking, though soft fabrics, the taste for which was imported from England; for these goods, although manufactured in France, are decidedly inspired by a study of Yorkshire.

Narrow stripes are very popular in silks and velvets, and some of the evening silks are striped with many colors, such as pink, blue and mauve. There seems to be no end to the variety in crepons, and among the latest designs is one which has a frosted surface, gained by introducing silk lines on the right side. "Crepon varech" has a seaweed pattern, but still another is called "crepon gulpure," resembling lace in its open-work design. Fuchsia red, yellow, various shades of green and all the tones of the violet are still popular shades, and one of the new violets are still popular shades, and one of the new colors is vaguely compared to the tint of "dark sanded sugar." Many of the new jet trimmings are festooned, and these will be used for capes as well as dresses. The new moire bead appears in most of these, and while it is a trifle dull, it is very rich and effective, defining the pattern so prettily among the beads which glisten. Narrow jet galons will continue in use, and large cabochons are introduced in them.

Mrs. Nuborder: "That's a very pretty motto you are working, Mrs. Browne-Haash,—'Learn to say no.' Is it for your son?" Mrs. Browne-Haash: "No it's for the dining-room"—Puck.

### Gems of Thought.

Cultivate the friendly spirit. If one would have friend he must be worthy of them.—Theodore T. Munger.

A man that is young in years may be old in hours, if he has lost no time; but that happeneth rarely.—Bacon.

The pleasantest things in the world are pleasant thoughts, and the art of life is to have as many of them as possible.—Bovee.

A character is like an acrostic of Alexandrian stanza—read it forward, backward or across, it still spells the same thing.—Emerson.

For whatever happens to me each day is my daily bread, provided I do not refuse to take it from Thy hand, and so feed upon it.—Fenelon.

If asked what is the remedy for the deepest sorrows of the human heart, to sustain a man under trials and enable him manfully to confront his afflictions, we must point him to something which, in a well-known hymn, is called "the old, old story," told of an old, old book, which is the greatest and best gift ever given to mankind.—William E. Gladstone.

My character to-day is, for the most part, simply the resultant of all the feelings I have cherished and all the deeds I have ever performed. It is the entirety of my previous years packed and crystallized into the present moment. So that character is the quintessence of biography; so that anybody who knows my character—and there is no keeping character under cover—knows what for forty or more years I have been doing and been thinking. Character is, for the most part, simply habit become fixed.—Rev. Charles H. Parkhurst.

In no circumstances whatever can man be comfortable without art, though it is only in sunshine that it can be happy. The beasts of the field can roam about by day, and couch by night on the cold earth, without danger to health or sense of misfortune. But man is miserable and speedily lost so soon as he removes from the precincts of human art, without his shoes, without his clothes, without his dog and his gun, without an inn or a cottage to shelter him by night. Nature is worse to him than a stepmother,—he cannot love her; she is a desolate and howling wilderness. He is not a child of nature like a hare. She does not provide him a banquet and a bed upon every little knoll, every green spot of earth. She persecutes him to death if he do not return to that sphere of art to which he belongs, and out of which she will show him no mercy, but be unto him a demon of despair and a hopeless perdition.—Ruskin.

### Curious Facts.

One of the latest scientific vagaries is the proposition that the central heat of the earth may be drawn upon and utilized by sinking wells or pits deep enough to tap superheated steam or gases having sufficient pressure to drive machinery and diffuse comfort on the surface.

A ripe, raw apple is one of the easiest foods for the stomach to deal with, the whole process of digestion only consuming eighty-five minutes. The malic acid of ripe apples, cooked or raw, helps to digest meat and to stimulate the liver and neutralize those noxious matters which, unless eliminated, produce skin eruptions. Apples are not as satisfying as potatoes, because of their delicate elements, but eaten with meat in place of tubers they are a golden food.

"Sponges will probably be cheaper in the near future," said R. C. Kingsley. "Recently it has been discovered that these animals will grow and flourish when cut up into slips and transplanted. This brings up the old question as to whether sponges are vegetable or animal, and may result in overturning the old-time verdict that they are a lower order of animal life and not vegetable. However this may be, the sponge beds can be increased indefinitely by simply planting small pieces of them, which grow rapidly."

### DOMESTIC ECONOMY.

#### Hints to Housekeepers.

Add a teaspoonful of ammonia to one teacupful of water for cleaning jewelry.

If ink is spattered on woodwork it may be taken out by scouring with sand and water and a little ammonia, then rinsing with soda and water.

White and delicately-tinted book bindings may be cleaned by rubbing the covers with a soft, perfectly fresh piece of chamois skin, dipped in powdered pumice stone.

Any woman doing her work may so systematize it that it will be the easiest possible for her. She need not follow any other person's methods, unless they are the very best for her own conditions.

Gold or silver embroidery may be cleaned by warming spirits of wine and applying it to the embroidery with a bit of soft sponge, and then drying it by rubbing it with soft new Canton flannel.

The white of an egg is one of the efficient remedies for a burn or a scald, excluding the air at once and affording instant relief. It is also used as an antidote for several poisons, taken internally, especially those of a corrosive nature.

It pays well to do mending before the article goes into the wash, since the processes to which it is there subjected materially enlarges the holes, and it is better and more agreeable to wear if the washing follows the mending.

A novel workbox can be made by lining the bottom of a tambourine with quilted satin of any desired shade, while between the metal clappers are fastened little satin pockets to hold spools, thimbles, wax, etc. If desired, a second tambourine a size larger may be converted into a cover by lining it with satin ribbon across it in such a way as to form compartments for scissors, papers of needles and other necessities of a sewing outfit.

Writing of bread in the *Household News* Mrs. Rorer says: "I have been for a number of years experimenting on the yeast question, and I have arrived fully at the conclusion that the yeast-bread-eating community succumb quickly to disease, and that bread as we get it is to blame for our reputation as a dyspeptic nation. Throughout the country and to the masses bread is served in a light, puffed-up condition, absolutely tasteless and deficient in nutritive qualities. The bread of France is made and baked in such condition that it is almost a crust, the starch has been partially converted into dextrose by the heat oven, and, as the crust requires thorough mastication, it is quite impossible for a person to suffer from indigestion from such French bread, while our soft American bread, the more it is masticated the heavier it becomes, and, by the time one is ready to swallow it, it is in most perfect dough pills; moreover, it is lightly or slackly baked; the yeast plant in many cases not being killed, it enters the stomach, and in a little time the bread eater has yeasty fermentation, which produces in the intestines serious trouble."

The eldest of three little chaps was sternly reproved by his mother for his bad behavior. "You are the oldest, Cyrus," she said; "and you ought to be an example to Homer and Jack." "Well, I'll be an example to Homer," said Cyrus; "but I won't be an example to both of 'em. Homer's got to be it for Jack."—Transcript.

### Domestic Hints.

**WHIPPED CREAM FOR CHOCOLATE.**—Pure sweet cream, not too thick, is required, and it will whip much easier if very cold; therefore a pan of cracked ice under the bowl is recommended. Put the cream into a deep bowl, add a few drops of vanilla and whip to a fine, stiff froth with an egg beater.

**SPICED ROLLS.**—Take a piece from your bread dough and roll it out half an inch thick, brush the top with melted butter and cover thick with cinnamon and fine white sugar. Begin at one side and roll up as jelly cake. Then cut it an inch thick and lay in a pan as biscuit close together and let them rise and bake twenty minutes.

**PIG'S HEAD CHEESE.**—Boil the pig's head until the bones come out, and chop the meat very fine. Roll eight crackers very fine, add it to the meat and mix thoroughly. Add some sweet herbs, pepper, salt and spices. Put this into a mold and press it for two or three days. It is very nice cut into thin slices and eaten cold.

**DRESSED BEEF.**—Boil a piece of beef until tender. Then take the meat from the bones, chop it fine, season with salt, pepper, mace, a little onion juice and a dash of red pepper. Moisten with some of the water it was boiled in. Put the chopped meat into a deep dish, put a plate on top with a light weight on it. When cold, slice crosswise, being careful not to break, and serve with a bit of acid jelly on each slice.

**ORANGE SOUFFLE.**—Four large oranges, six eggs, three heaping tablespoonfuls of sugar, a pint and a half of rich milk. Peel, slice and seed the oranges and place them upon the bottom of a dish you wish to send to the table, and sprinkle over them a heaping tablespoonful of the sugar. Make a custard of the yolks of the eggs, the milk and the remainder of the sugar. Set aside to cool, and when cold pour over the sliced oranges. Beat the whites of the eggs to a stiff froth, add a spoonful of powdered sugar, spread this over the pudding and set in the oven and brown slightly.

**TO STEW CHICKENS WHOLE.**—Take a large, plump chicken, wash thoroughly, then wipe it dry with a clean napkin, and rub pepper and salt inside and out. Take from their liquor as many nice large oysters as the chicken will hold. Examine each oyster carefully to see that no particle of shell adheres to it; drain them very dry in a colander, and fill the chicken quite plump with the oysters. Sew up and skewer it tightly. Then put it into a pail, without any water, large enough to hold it without crowding or spoiling the shape. Cover tightly. Put this pail into a large pot of boiling water, and let it boil until the chicken is tender. Remove the chicken to a hot platter, cover closely as soon as out of the pail, so that the air will not touch it, and set it into the oven with the door open to keep hot while you prepare the gravy. Turn out the gravy that has been made from the stewing into a small pan, add one tablespoonful of butter and half a teacup of rich, thick cream, the yolks of three hard-boiled eggs, chopped or mashed very fine, a tablespoonful of minced parsley, a dash of cayenne, and a tablespoonful of cornstarch stirred smooth in a little cold milk. Let this boil up once thoroughly, then pour over the chicken, and serve very hot.

"Cool as a cucumber" is scientifically correct. Investigation shows that this vegetable has a temperature one degree below that of the surrounding atmosphere.

Highest of all in Leavening Power.—Latest U. S. Gov't Report

**Royal Baking Powder**  
ABSOLUTELY PURE



## A Kansas City Electric Carriage.

A recent dispatch from Kansas City, Mo., said that a horseless carriage went skimming along the smooth asphalt of Fourteenth street in the vicinity of Cherry street, fulfilling Mother Shipton's prophecy that "Carriages without horses shall run," and terrifying two negroes, who saw sparks, and, apparently, sulphurous flames issuing from under it.

The vehicle was an electric carriage, of Kansas City invention and manufacture, and is the only one of its kind in the United States. There are several electrical carriages in New York city. The machine worked perfectly. A speed of eleven miles an hour was obtained.

The carriage is about the size of an ordinary vehicle. One seat faces the front and another one faces to the rear. A storage battery, composed of five series of five cells each, furnishes a current of sixty-seven and one half volts, and the cells are arranged in three tiers beneath the seats. The wheels are of wood, with India rubber cushions on the tires. The hind wheels, which are three feet two inches in diameter, have on their inner sides a cast-iron flange twenty-six inches in diameter and five inches wide. Power from the batteries is communicated to the flange by a rawhide friction pulley, revolving from six hundred to one thousand times a minute, and is capable of being elevated or depressed at will by the driver by means of levers, on which he places his feet. The steering is done by a tooth segment and attached to the axle of the fore wheels and handled by a steering post, manipulated by the driver with his hands. The carriage can make quick, short turns. The storage batteries will run the machine about seven or eight hours. The carriage weighs about two thousand pounds, and is quicker and lighter than the European coaches.

## Earnings of Labor in 1890.

Some idea of the enormous interest of laborers and mechanics in this country's commerce is shown by the remarks of the Governor of Ohio, at the recent meeting of the National Association of Manufacturers in Cincinnati. "Do you know the amount of wages paid to the labor of this country in 1890 (the last census year)?" said Mr. McKinley. "The stupendous sum of \$1,221,170,454, or \$3,914,000 to each working day, or \$391,400 for every working hour of every working day in that busy year."

"As showing the advance of our manufactures, we had exactly 950,000 more persons employed in the year 1890 than in 1880, and more in 1892 than in either period, and the aggregate of wages of 1892 was more than double the amount paid in 1880. No people of any other country ever had so large a share in so great a product as the working people of the United States then enjoyed. The value of the product of our manufactures in 1890 was more than 100 per cent greater than those of 1880. When the manufacturers in 1890 were prosperous the wage earners were equally prosperous; agriculture was profitable; railroads were actively employed, and merchants were doing a satisfactory business. Why, in 1891, the amount of the deposits in the savings banks of the country was \$1,623,079,749, and it is estimated that ninety per cent of these deposits were the earnings of our wage earners received from our home manufacturers."

If you know how to spend less than you get, you have the philosopher's stone.—Poor Richard.

## Beware of Ointments for Catarrh that contain Mercury.

As mercury will surely destroy the sense of smell and completely derange the whole system when entering it through the mucous surface. Such articles should never be used except on prescriptions from reputable physicians, as the damage they will do is tenfold to the good you can possibly derive from them. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, O., contains no mercury, and is taken internally, acting directly upon the blood and mucous surfaces of the system. By buying Hall's Catarrh Cure be sure you get the genuine. It is taken internally, and made in Toledo, Ohio, by F. J. Cheney & Co. Testimonials free. Sold by Druggists; price, 75c. per bottle.

## FOLDING SAWING MACHINE.

**9 CORDS IN 10 HOURS.**  
EASY.  
No Backache.  
FOLDED.  
SAWS DOWN TREES.  
BY ONE MAN.  
Send for free illustrated Catalogue, showing testimonials from thousands who have sawed from 5 to 9 cords daily. It saws down trees, folds like a pocket knife, weighs only 41 lbs., easily carried on its shoulder. One man can saw more timber with it than two men with a cross-cut saw. 57,000 in use. We also make larger sized machine to carry 7-foot saw.

**JAMES LINFORTH,**  
37 Market St., San Francisco.

## FOR SALE!

Twenty or Fifty Acres of a

## Fruit Ranch

In Lagoon Valley, near Vacaville, Solano County, Cal. French Prunes, Bartlett Pears and Cherries in full bearing. House with modern improvements.

C. H. STEINMETZ,

Vacaville, California  
Or 126 Kearny Street, San Francisco.

## Krogh Mfg. Co.

—Manufacturers of—

Triple Acting Pumps, Centrifugal Pumps,  
Steam Pumps, Deep-Well Pumps,  
Wind Mills, Horse Powers, Wine Machinery.



Link-Belt Elevators and Conveyors.  
Link-Chain and Sprocket Wheels.  
51 Beale Street, San Francisco.

## "INDURINE" COLD WATER PAINTS.

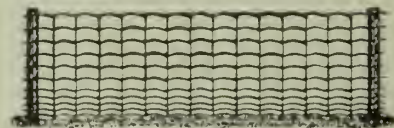
A Most Remarkable Material is the  
**OUTSIDE INDURINE.**  
It stands rain and exposure as well as oil paint, and costs only a fraction as much.  
It is just the thing for fences, outbuildings, factories, etc., being cheap, durable and easily applied by anyone.  
It has no equal as a light reflector for light-shafts and court-yards of large buildings. It is supplied in a thick paste, to be diluted with cold water. It is made in white and several colors.

**INSIDE INDURINE**  
Is designed especially for factories, stables, and general inside work, as a substitute for whitewash, kalsomine or oil paint.

It will not rub or scale, soften or darken with age, and works well over old whitewash. A dry powder to be mixed with cold water.

Both Indurines are perfectly fire-proof.  
Send for circular and prices to

**WM. BURD, MANUFACTURER,**  
Mills Building, San Francisco, Cal.



## FACTS FROM THE FACTORY.

The Page is the only elastic fence made, and requires special wire. Our contracts for the manufacture of this wire cover many thousands of tons, all guaranteed to suit the purpose. The Superintendents of the largest mills in the country have spent days at our factory studying our particular needs. This wire costs more than the common article, which could not be used if furnished free. Our complete fence costs the farmer less than he can buy the wire of which it is made and is the cheapest in the end.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

## Seeds, Plants, Etc.

## THE FINEST STOCK OF

## Citrus and Deciduous Trees,

## BERRIES AND OTHER PLANTS,

In the State, at the Home Nurseries, Pasadena, Cal.

One and two-year-old Orange and Lemon Trees, the finest and thickest stock ever grown anywhere, and all the best varieties, also Pomelo (Grape Fruit), and the Japanese Red Daney Tangerine Orange; also the best deciduous trees, Raspberries, Blackberries and the Wonderful Everbearing and other fine varieties of Strawberries. Nothing but the best of all varieties of Fruits and Nuts. Don't fail to write for prices to

HEWITT &amp; CORSON, Pro'ps, Pasadena, Cal.

## Thompson Seedless

ROOTED GRAPE CUTTINGS FOR SALE.

Box 57, Vuba City, Cal.

## ACRE APPLES, \$1,493

Write NURSERIES AND ORCHARDS, Louisiana, Mo., for free sample copy telling about it. A practical Fruit and Farm paper, published by Stark Bros., 40c a year; circulation, 400,000 copies. The "Cream of the Cream"—gives the busy Fruit Grower or Farmer, who hasn't the time or the money to buy and read a great mass of papers, what is best from them all, what he wants to know.

## Seeds, Plants, Etc.

## OLIVE TREES.

MISSION, MANZANILLO,  
NEVADILLO, RUBRA, COLUMELLA,  
PICHOLINE, REGALIS AND UVARIA.

LUELLING ALMONDS,  
JAPANESE WINEBERRIES,  
EVERGREEN BLACKBERRIES.

A Complete Assortment of

## FRUIT and ORNAMENTAL TREES.

ROSES, PALMS, MAGNOLIAS, ETC.

## VEGETABLE, FLOWER and FARM SEEDS! SEEDS!

Descriptive Catalogue and prices on application.

## TRUMBULL &amp; BEEBE,

Seedsmen and Nurserymen,

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E. J. Bowen,  
SEED MERCHANT.

Alfalfa, Grass, Clover, Vegetable  
and Flower Seeds.—Onion Sets.

Largest Stock and Most Complete Assortment.

Send for large illustrated descriptive and priced Catalogue, mailed free.

New crop Salt Lake Alfalfa. Inquire for samples and prices.

Address—

815, 817 and 819 Sansome St., San Francisco, Cal.

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Or 214 Commercial St., Seattle, Wash.

You  
Can Get  
Ferry's Seeds at your dealers  
as fresh and fertile as though  
you got them direct from Ferry's  
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**FERRY'S SEEDS**  
are known and planted everywhere, and are always the best. Ferry's Seed Annual for 1895 tells all about them. — Free.  
D. M. Ferry & Co.  
Detroit, Mich.

## NURSERY STOCK FOR SALE.

Spark's Mammoth  
AND ROYAL APRICOTS and PRUNES.

Prices to Meet the Times.

Before purchasing elsewhere write—

N. B. SMITH, Ventura, Ventura Co., Cal.

Olive Trees  
IN VARIETY.

For prices and a pamphlet on Olive Culture, address

JOHN S. CALKINS,

Pomona, Los Angeles Co., Cal.

## PACIFIC NURSERY.

Office and Greenhouses:  
Cor. Baker and Lombard Sts., San Francisco.  
Nursery at Millbrae, San Mateo Co.

**GROWN WITHOUT IRRIGATION.**  
Prune an Myrobalan, French, German, Bulgarian, Robe de Sargent, Clyman, Tragedy, Fellenburg, St. Catherine's, etc. \$8 and \$10 per 100  
Apples, leading sorts, etc. \$8 and \$10 per 100  
Almonds, the best soft-shell sorts, \$8 and \$10 per 100  
Cherries, an Mazzard, etc. \$10 and \$12 per 100  
Peaches, best free and cling varieties \$8 and \$10 per 100  
Pears, Bartlett and other sorts, \$10 and \$12 per 100  
Roses, two-year-old, field grown, newest and best old varieties, etc. \$20 each, \$18 per 100  
Monterey Cypress, Blue and Red Gum, in boxes, transplanted, \$1.25 & 100, \$10 to \$12.50 & 1000  
Palm California, Japan and Australian Fan Palm, Phoenix (Date Palm), Dragonas, and a large assortment of evergreen trees, deciduous trees and shrubbery. Azaleas India and Mollis, Camellias, Rhododendron, Fuchsias, at low prices. F. LUDERMANN.

Santa Rosa  
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A FINE LARGE STOCK, SECOND TO NONE.

All the best varieties in stock.

Petite and Peach, Tragedy, Clyman, Burbank  
Rube and Royal Ann in big surplus and very cheap. Address

R. W. BELL,

SANTA ROSA, CALIFORNIA.

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## Olive Trees,

Mission and Nevadillo,  
Three-Year Old Stock,

4 to 6 Feet and 6 to 8 Feet High.  
BOTTOM PRICES.

## JOHN E. PACKARD,

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## Olive Trees.

ALL KINDS OF NURSERY STOCK Send for our Book on Olive Culture.

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## Olive Trees for Sale

GEO. H. KUNZ, Sacramento.

Mission, 3 years, 5 to 6 feet.  
Mission, 2 years, 3 to 4 feet.  
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## FRUIT TREES.

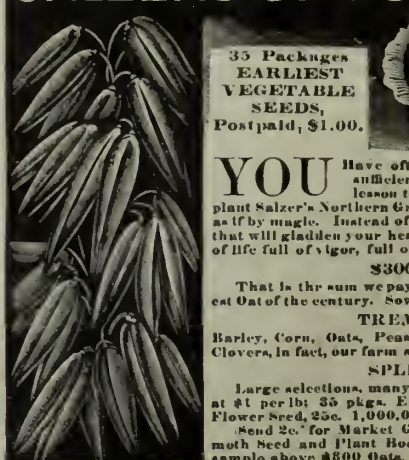
FRENCH PRUNE, BARTLETT PEARS,  
Apple, Peach, Cherry, Apricot and Almond  
TREES.

First-Class Trees at very low prices.

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**TREES** A FINE ASSORTMENT,  
—AND—  
**PLANTS** best varieties, free from  
pests of any kind. Prunus  
Simoni, Bing, Rostraver  
and Murdoch Cherries;  
Black California Figs; Rice Soft Shell  
and other Almonds; American Sweet Chestnuts;  
Frappartius Walnuts. Hardy mountain grown  
Orange Trees. Our oranges have stood 22 degrees  
this winter without injury. Dollar Strawberry,  
the best berry for home use or market. Address  
C. M. SILVA & SON, Lincoln, Placer County,  
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35 Packages  
EARLIEST  
VEGETABLE  
SEEDS,  
Postpaid, \$1.00.

YOU

Have often seen seed come up poor and sickly, without sufficient vitality to produce a crop—that was an object lesson that poor seeds produce poor crops—but when you plant Salzer's Northern Grown Seeds, for garden or farm, the scene changes as if by magic. Instead of poor yields you at once get rousing crops, crops that will gladden your heart and fill your purse, for Salzer's Seeds are full of life full of vigor, full of producing qualities.

**\$300 FOR A NEW NAME.**  
That is the sum we pay for a new name for our new Out. It is the greatest Out of the century. Sow this out and you cure hard times. See Catalogue.

**TREMENDOUS STOCKS OF**  
Barley, Corn, Oats, Peas, Wheat, Fodder Plants, Potatoes, Grasses and Clovers, in fact, our farm seed list is the most complete offered in America.

**SPLENDID VEGETABLES.**  
Large selections, many splendid sorts. Everything cheap. Onion Seed at \$1 per lb. 35 pkgs. Earliest Vegetables, only \$1, postpaid; 10 pkgs. Flower Seed, 25c. 1,000,000 Roses, Plants and Small Fruits, hardly as Oaks. Send 2c. for Market Gardener's Wholesale List; or send 5c. for Mammoth Seed and Plant Book, 144 pages, or send 10c. for Seed Book and sample above \$500 Oats.

## JOHN A. SALZER SEED CO. LACROSSE, WIS.



# FRUITS AND FLOWERS

**A FAMILY Orchard.** 25 first-class 1-year-old Fruit Trees for \$2.50

CHOICE VARIETIES OUR OWN SELECTION  
Delivered by us free on board cars at San Francisco.  
This offer holds good up to and including March 9th.

|           |            |              |                 |                 |
|-----------|------------|--------------|-----------------|-----------------|
| 1 Apple.  | 1 Pear.    | 1 Quince     | 1 Persimmon.    | 2 Blackberries. |
| 1 Cherry. | 1 Almond.  | 1 Fig.       | 2 Gooseberries. | 2 Raspberries.  |
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**"A Garden for a Dollar"**

The following thirty distinct varieties, all strong, well grown plants, will be mailed free to any address for \$1.00:

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|-------------------------------------|-------------------------------|---------------------------------|
| 1 Achyrantes.                       | 1 Fuchsia (Ladies' Ear Drop.) | 1 Pteris Cretica (Fern.)        |
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| 1 Ampelopsis Veitchii (Boston Ivy.) | 1 Geranium, Rose-scented.     | 1 Smilax, Climber.              |
| 1 Abutilon (Flowering Maple.)       | 1 Golden Feather.             | 1 Solanum Jasminoides, Climber. |
| 1 Carnation.                        | 1 Heliotrope.                 | 1 Verbena.                      |
| 1 Cuphea (Ladies' Cigar Plant.)     | 1 Honeysuckle, Climber.       | 1 Vinca (Creeping Myrtle.)      |
| 1 Chrysanthemum.                    | 1 Manettia Vine, Climber.     | 1 Violet, Purple.               |
| 1 Daisy.                            | 1 Marguerite.                 | 1 Violet, White.                |
| 1 Date Palm.                        | 1 Petunia.                    | 1 Wandering Jew.                |

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| 6 Plants of the New CALIFORNIA VIOLET. | 2 CHRYSANTHEMUMS, assorted. |
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All young well-rooted plants.

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## General Nursery Stock.

SEND FOR PRICES.

### \*\*\* CALIFORNIA RED PLUM. \*\*\*

This is a new plum originated in Sutter county, where it has fruited for the past six years, and ripens the last of June. I am the only propagator of this new fruit and have no hesitancy in recommending this new plum for general planting, having over 1000 trees planted. Read the following letter from the largest plum grower and shipper in the State:

WINTERS, CAL., Oct. 18, 1894.  
Mr. J. T. Bogue, Tudor, Cal.—"I consider the California Red Plum the leading plum in the State. It certainly is one of the best shippers I have. It is very prolific, a fine grower, and has the qualities that go to make up a fine fruit for Eastern shipment. It is extra large, has a beautiful color when nearly hard, and will last from ten to twenty days after picking. It is earlier than the Peach Plum and fully as large. It hangs well on the tree after they will do to pick, and still remain firm and in good condition to ship. I consider it one of the best plums on the Coast. When it first begins to ripen it has a red cheek, but as it ripens it becomes a dark purple. I cannot speak in too high terms of the California Red Plum as a shipper."  
G. W. THISELL, SR.

SACRAMENTO, Sept. 5, 1894.  
Mr. J. T. Bogue, Tudor, Cal.—"In answer to your inquiry regarding the California Red Plum, we wish to state that from experience we have had with this Plum in the Eastern markets, the net results show that it is a very valuable Plum and we take pleasure in recommending same, believing that it is one of the best shipping and selling Plums that has ever been discovered for California shippers." Yours truly,  
PORTER BROTHERS COMPANY, per NATE R. SALSBERY, Vice-Pres.

JAMES T. BOGUE,

Formerly at Marysville.

TUDOR, SUTTER COUNTY, CAL.

INCORPORATED 1884.

500 ACRES.

## California Nursery Company,

NILES, CALIFORNIA.

### NURSERY STOCK OF ALL KINDS.

Fruit Trees, Nut Trees, Small Fruits, Ornamental Trees and Shrubs, Palms, Flowering Plants, Etc.

SPECIALTY:—All the Italian, French and Spanish Varieties of Olives of Note—"True" Spanish Queen, Rubra, Regalis, Etc.

Write us for new Catalogues and Estimates. Prices to suit the times.

JOHN ROCK, : : : : : Manager.

ESTABLISHED 1863.

THOS. MEHERIN,  
NURSERYMAN AND SEEDSMAN.  
AGENT FOR THE CALIFORNIA NURSERY CO.

### FRUIT TREES.

Large and Complete Stock of Fruit and Ornamental Trees and Plants, at prices to suit the times.

### SEEDS!

GRASS, CLOVER, VEGETABLE, FLOWER AND TREE SEEDS, ETC.

Catalogue mailed free on application.

Please mention this paper.

THOS. MEHERIN, 516 Battery Street (P. O. Box 2059), San Francisco, Cal.

## ORANGE TREES at Rock Bottom Prices.

To close out a special lot of three-year buds of Med. Sweets (five-year roots), finely branched, 4x6 feet, we offer them at \$25 the hundred.

Write us if you want Med. Sweets or Wash. Navels; we can give you lower prices for good trees than any one.

Cal. Fan and Cham. Excelsa Palms, Laurustinus, Dracaena Indivisa, Roses, Tuberoses, Etc., Etc.

Agents wanted in every town in Northern and Central California where we are not represented.

ADDRESS ALOHA ORANGE NURSERIES,

MRS. E. M. FRASER, Prop'r.

FRED C. MILLS, Manager.

PENRYN, PLACER COUNTY, CAL.

## ALEXANDER & HAMMON,

RIO BONITO NURSERIES, Biggs, Butte Co., Cal.

### DECIDUOUS FRUIT TREES

OUR SPECIALTY.

The most Complete Assortment of General Nursery Stock grown on the Pacific Coast.

1,000,000 Trees for the Season of 1894-95 in Stock.

Acknowledged everywhere to be equal to the best. Guaranteed to be healthy and free from scale or other pests.

Send for Catalogue and Prices. Correspondence solicited. Address:

Alexander & Hammon,

Biggs, Butte County, Cal.

## FANCHER CREEK NURSERY,

FRESNO, - - - - - CALIFORNIA.

Offers a Full and Complete Assortment of

★ FRUIT TREES, ★  
★ OLIVE TREES, ★  
★ GRAPE VINES,  
★ ORNAMENTAL TREES, AND ROSES  
★ CITRUS TREES.

Send for Descriptive Catalogue and Prices.

ADDRESS

GEO. C. ROEDING, - - - - - MANAGER

FOUNDED 1865.

85 ACRES.

## Pajaro Valley Nursery.

ALL KINDS OF FRUIT TREES.

DECIDUOUS, ORNAMENTAL AND SHADE TREES, SMALL FRUITS, ETC.

The only nursery offering the true and genuine Loganberry, one of the finest berries ever produced. None can equal it. First introduced and offered for sale at this nursery.

Send for catalogue, colored plate and circular.

JAMES WATERS,

WATSONVILLE, CALIFORNIA.

ESTABLISHED 1853.

## Stockton Nursery.

Get our Catalogue and Prices before purchasing your Trees or Anything in the Nursery Line.

Clean, Thrifty, Healthy Stock at Prices to Suit the Times.

E. C. Clowes,

Stockton, California.

## Home Grown Seed.

Our farmer friends, you know you greatly lessen your risks when you buy Seed directly from the grower. We raise Seeds of the earliest Sweet Corn, the earliest and best Pole and Bush Beans, the best earliest and best late market Beets, the best Cucumbers, the best of the earliest and latest Drumhead Cabbage, the earliest of all the Wrinkled Peas, the best Dwarf and decidedly the best of the Marrowfats, the best early and late Squashes, the best market Carrot, the earliest Red and the very best of all the Yellow Onions. We offer these and numerous other varieties, including several valuable new Vegetables, in our Vegetable and Flower Seed Catalogue for 1895. Sent free.

J. J. H. GREGORY & SON,

Marblehead, Mass.



## Coast Industrial Notes.

—The advent of pennies is reported in Seattle, Wash.

—The Great Northern in Washington State has contracted for 350,000 ties to be delivered by June 1st.

—During 1894 the Arizona Company at Flagstaff, Arizona, shipped 148 carloads of pine lumber to Los Angeles.

—Lumber exports from the Puget sound district in the month of January amounted to 4,971,000 feet, valued at \$41,105.

—The Coast and Geodetic Survey steamer Hassler, now at Tacoma, is ordered sold. She was built twenty-five years ago, and cost \$70,000.

—It is seriously announced that the Great Northern Railway is preparing as rapidly as possible to extend its coast line from Seattle south to Tacoma and Portland, and at the latter city it is to connect with the Southern Pacific for this city.

—Sixteen more miles of track will complete the line of the Santa Fe, Prescott & Phoenix Railway Company. It will be in operation in three weeks. The new road is 197 miles in length, extending from Ash Fork, via Prescott, to Phoenix, Arizona.

—The Pacific Coast Steamship Company has reduced freight rates between this port and Alaska from \$11 to \$3 per ton on general merchandise, subject to a further reduction to parties having freight contracts with the company, being the result of competition.

—Grace & Co's chartered steamer the Bawmore is back from Talara Bay with 2500 tons crude oil. Captain Woodside reports having used liquid fuel all the way up, and found it satisfactory. The flues were clean, and there was no ash. The return trip was made in twenty days.

—The West Side Canal and Land Company has incorporated with a capital of \$5,000,000, of which \$25,000 have been subscribed. The purpose of the company is to irrigate Fresno, Kings, Merced and Stanislaus counties. Directors—William Strader, B. W. Gray, T. L. Orr, A. B. Dobbins and Wm. J. Smith.

—The Sacramento Electric Light and Power Co. have begun the erection of their pole line between Folsom and Sacramento. The first of the 1000-H. P. electric generators will be at the power house in Folsom about May 15th. The company expects to have the power in Sacramento and available for use by June 5th.

Governor Budd has appointed the following to act as commissioners for California at the Mexican International Exposition next year: Colonel A. Andrews, Irving Scott and James Cross of this city, Colonel H. Weinstock of Sacramento, S. J. Del Valle of Los Angeles, and Daniel Murphy Jr. of San Jose. These commissioners will act in conjunction with the local Mexican Consul.

—The first cargo of wheat that has gone around Cape Horn in thirty years, or since the transcontinental railroads monopolized the trade, has arrived in New York on the ship Reaper. It consists of 2000 tons, from Astoria, Or. The wheat will be sold at a loss, but the trip is due to the fact that the Reaper's cargo of barley was destroyed in the Portland fire of September '94, and the vessel had to take wheat instead.

—The bill which was introduced in the State Senate providing for the formation of a Sacramento Valley Drainage District, has been withdrawn, Senator Hart explains that he had introduced the bill at the request of Hon. A. H. Rose, Commissioner of Public Works, but had not agreed to support it. While he believed some plan of reclamation similar to that proposed by Mr. Rose would be adopted at a future time, he did not think the people were ready for it yet.

## Hot Salt Solution for Relief of Short Hemorrhage.

Dr. Wyeth, speaking at the meeting of the New York State Association of Railway Surgeons, strongly recommended the injection into the circulation, through a vein, of hot salt solution to take the place, in part, of the volume of blood which has been lost as a result of accident. "The solution which I have employed, running in as much as five points in a single operation, is composed of clean water, which has been boiled and allowed to cool to 110° or 120° F., or just as hot as the hand can bear, to every pint of which a teaspoonful of common salt is added. I have seen the pulse go from 140, in cases of tremendous hemorrhage, steadily down to 70 to the minute within two minutes of the injection of a pint of this solution. While it may be used cooler than 110° F., and in some emergencies this may be necessary, it is safer to give it as hot as 110° to 120°, because the cold solution robs the body of its heat, while the hot solution carries heat with it, and thus adds to the maintenance of the normal temperature. The apparatus is simple, a metal or glass pipette to go into the vein, a rubber tube three or four feet long and an irrigator bag or vessel."

## Rheumatism, Neuralgia, Sciatica, Backache.

## ST. JACOBS OIL

SAFE, SURE, PROMPT.

## Cover Your Barns,

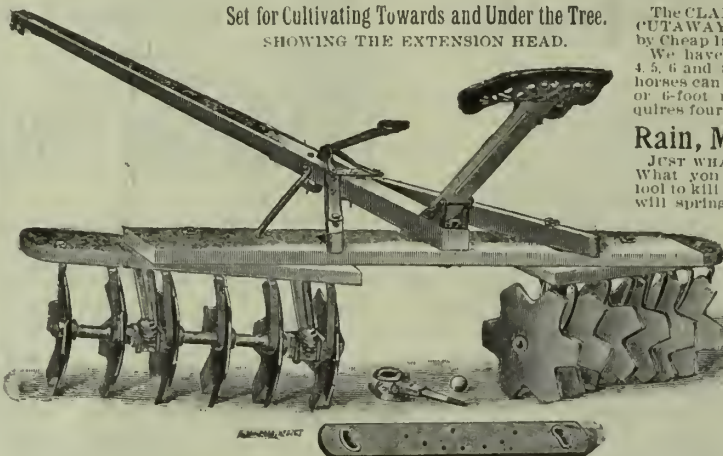
OUTHOUSES, SHEDS AND DWELLINGS WITH  
P. & B. ROOFING.FOR FENCE POSTS, WATER TANKS, ROOFS, WOOD OR IRON,  
P. & B. PAINT.FOR POULTRY HOUSES, CREAMERIES, FLOORS AND WALLS,  
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Highest Awards at Chicago, 1893, San Francisco, 1894.

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## The Reversible or Fruit-Growers' and Orchard Harrow.

Set for Cultivating Towards and Under the Tree.  
SHOWING THE EXTENSION HEAD.

The CLARKS is the ONLY CUTAWAY. Don't be fooled by Cheap Imitations. We have 'em reversible. 4, 5, 6 and 8-foot cut. Two horses can easily handle a 5 or 6-foot machine. It requires four for an 8-foot.

## Rain, More Rain!

JUST WHAT YOU NEEDED. What you need now is a tool to kill the weeds that will spring up and at the same time break the crust and pulverize your ground and prevent the moisture from escaping. We offer you for this purpose

The Famous Clark's Cutaway Harrow.

IT WILL DO IT, TOO, and do it better than any other tool you have or can get. We furnish (without extra charge) with the 4, 5 and 6-foot machines, if desired, an extension head, as shown in cut above. By using this head the soil can be cultivated clear to the trunk of the tree without the overhanging branches interfering in the least with the work of the horses.

ALLISON, NEFF &amp; CO.,

421 &amp; 423 MARKET STREET SAN FRANCISCO, CAL.

## Protect Your Trees

—WITH—

## Gilman's Patent Tule Tree Protector.

PATENTED AUGUST 1, 1893.



FIRST PRIZE—Medal and Diploma—California Mid-Winter International Exposition.

Cheapest, best and only one to protect trees and vines from frost, sunburn, rabbits, squirrels, borers and other tree pests. For testimonials from parties who are using them, send for descriptive circulars.

B. F. GILMAN,

Sole Manufacturer of Patent Tule Covers.

420 Ninth Street, San Francisco, Cal.

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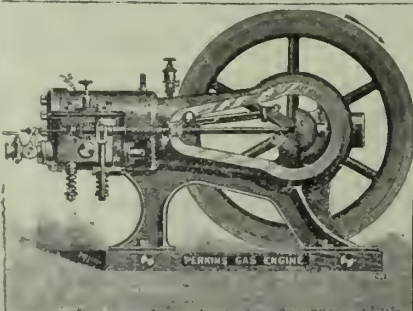
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GAS, GASOLINE or OIL ENGINES,

Also PUMPING MACHINERY.

Prices, according to capacity, \$200 and upwards. Give full particulars for close estimates. Write for catalogue.

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—MANUFACTURERS OF—

## SHEET IRON &amp; STEEL PIPE

FOR TOWN WATER WORKS.

Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes.

130 BEALE STREET, SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.

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OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 1874.



Capital Paid Up.....\$1,000,000  
Reserve Fund and Undivided Profits, 130,000  
Dividends Paid to Stockholders.... 832,000

—OFFICERS—

A. D. LOGAN.....President.  
I. C. STEELE.....Vice-President.  
ALBERT MONTPELLIER.....Cashier and Manager.  
FRANK McMULLEN.....Secretary.  
General Banking. Deposits Received, Gold and Silver. Bills of Exchange Bought and Sold. Loans on Wheat and Country Produce a Specialty.  
January 1, 1894. A. MONTPELLIER, Manager.

## THE Porteous Improved Scraper.

Patented April 3, 1883. Patented April 17, 1888.



Manufactured by G. LISSENDEN.

The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Leveling Land, Road Making, etc.

This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

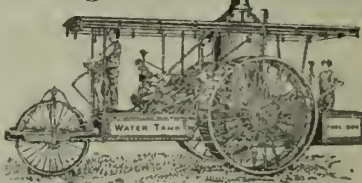
This Scraper is all Steel—the only one manufactured in the State.  
Price, all Steel, four-horse, \$40; Steel, two-horse, \$31. Address all orders to

G. LISSENDEN, STOCKTON, CAL.



Makes a clean sweep of Two Acres at a sitting. A man, a boy and a horse can operate it. No Heavy Chains or rods to handle. The crop on a few acres the first year will pay for the Machine. Send postal card for Illustrated Catalogue, giving price, terms, testimonials, also full information concerning our Iron Giant Grub and Stump Machine, Two Horse Hawkeye and other appliances for clearing timberland. Address MILNE MANUFACTURING CO., 641 8th St., Monmouth, Ill. Sunnyvale Shetland Pony Farm. For catalogue address Milne Bros. at above office and number. Breeders of Pure Shetland Ponies.

## Price's Traction Engine.



We have one of these engines that was used about one month last season and was taken back by us by reason of illness of purchaser. Engine is in perfect order, and in better working order than when first sent from the factory. A BARGAIN. Indicated power, 80-horse; Cylinders, 8x8; Wheels, 8 ft. high, 28 in. wide; weight, less than 10 tons. Price when new, \$4500.

HOOKER &amp; CO.,

16 and 18 Drumm Street, San Francisco.

## METAL WHEELS for your WAGONS.

Any size you want, 20 to 60 in high. Tires 1 to 8 in wide—lugs to fit any axle. Makes 1000 many times in a season to have set of low wheels to fit your wagon for hauling grain, fodder, manure, hogs, &c. No resetting of tires. Call free. Address EMPIRE MFG. CO., Quincy, Ill.





## S. F. MARKET REPORT.

## Market Review.

SAN FRANCISCO, March 6, 1895.

**FLOUR**—We quote: Net cash prices for Family Extras, \$3 25@3 35; bbls, Bakers' Extras, \$3 15@3 25; Superfine, \$2 10@2 40; bbl.

**WHEAT**—The market is firm, without being buoyant. Good to choice shipping Wheat changes hands at a range of 83½@85¢ cwt., while large parcels would likely find custom at 86¼¢. Milling grades are quotable at 90¢@95¢ cwt. Walla Walla Wheat is quotable at 78½@81¼¢ for fair average quality, 82½@87½¢ for bluestem and 75@77½¢ for damp.

**BARLEY**—Trading is not brisk, but there is steady tone to the situation. Choice product is in anything but free offering, and holders are firm in asking full prices. We quote as follows: Feed, fair to good, 73½@75¢; choice, 76¼@77½¢; Brewing, 85@90¢ cwt.

**OATS**—Business is beginning to show slight improvement, though prices are undisturbed. We quote: Milling, \$1 02½@1 15; Surprise, \$1 05@1 15; fancy feed, \$1 01 05; good to choice, 95¢@1; fair to good, 90¢@95¢; poor to fair, 82½@87½¢; Black, \$1 10@1 25; Red, \$1 05@1 17½; Gray, 92½@97½¢ cwt.

**CORN**—Market quiet. We quote: Large Yellow, \$1 17½@1 22½; small Yellow, \$1 25@1 27½; White, \$1 22½@1 25 cwt.

**RYE**—Quotable at 85@87½¢ cwt.

**BUCKWHEAT**—Quotable at 80@85¢ cwt.

**HAY**—Weak under free supplies. Wire-bound Hay sells at \$3 75 ton less than rope-bound Hay. Following are the wholesale city prices for rope-bound Hay: Wheat, \$8@11 50; Wheat and Oat, \$8@11; Oat, \$9@11; Alfalfa, \$8@9 50; Barley, \$8@10; Clover, \$8 50@9 50; compressed, \$8 50@10 50; Stock, \$6@7 75 ton.

**STRAW**—Quotable at 70@80¢ bale.

**FEED**—Manhattan Horse Food (Red Ball Brand) in 100-lb casks, \$8; Manhattan Egg Food, 100-lb bags, \$11 50.

**BEANS**—Rather slow movement. We quote as follows: Bayos, \$1 75@1 90; Butter, \$1 75@1 80 for small and \$2@2 25 for large; Pink, \$1 10@1 35; Red, \$1 60@1 65; Lima, \$4 10@4 25; Pea, \$2 25@2 75; Small White, \$2 25@2 75; Large White, \$2 10@2 50; Blackeye, \$2 75@3; Red Kidney, \$2 75@3; Horse, \$1 60@1 70 cwt.

**SEEDS**—No pronounced inquiry. We quote: Mustard, Brown, \$1 50@1 75; Yellow, \$2@2 25; Trieste, \$1 75@2 15; Canary, \$3@4; Hemp, 30¢@3½¢; Rape, 1½¢@2½¢; Timothy, 5½¢@6½¢; Alfalfa, 7½¢@7¾¢ lb; Flax, \$2@2 50 cwt.

**POTATOES**—Offerings are large and prices favor consumers. Receipts of new are increasing, the arrivals yesterday being 11 sacks. We quote: New Potatoes, 1½¢@2¢ lb; Early Rose, 40¢@55¢; River Reds, 20¢@30¢; Burbanks, 30¢@40¢; Oregon Burbanks, 40¢@55¢; Salinas Burbanks, 75¢@1; Sweet, 75¢@1 for Rivers and \$1 50@1 75 cwt for choice stock.

**ONIONS**—Prices for choice stock hold up steadily. Quotable at 90¢@1 10 for fair to choice. Cut Onions, 40¢@75¢ sack.

**VARIOUS**—Supplies of seasonable kinds are showing increase, and much larger arrivals are certain in the near future. Receipts yesterday morning included 192 boxes Asparagus, 67 boxes Rhubarb and 7 sacks Peas. Most of the Peas offering are of poor quality, being hard to sell at the lower figure, while good stock readily brings the top rate. Egg Plant is offering at 10¢@12½¢ lb. Cabbage is still being shipped East. We quote: Hothouse Cucumbers, 40¢@1 10 dozen; Asparagus, 7¢@12½¢ lb; Rhubarb, 5¢@6¢ lb; Green Peas, 4¢@7¢ lb; Green Peppers, 3¢@4¢ lb; Turnips, 50¢ cwt; Beets 60¢@75¢ sack; Carrots, 30¢@50¢; Cabbage, 50¢@60¢ cwt; Garlic, 30¢@3½¢ lb; Cauliflower, 30¢@40¢ dozen; Dried Peppers, 12½¢@15¢ lb; Dried Okra, 12½¢ lb.

**FRESH FRUIT**—Offerings of Apples are mostly of ordinary quality, selling slowly. Select stock is wanted, there being prompt buyers at full figures. We quote: Apples, 40¢@1 per box, with \$1 25 for fancy.

**CITRUS FRUIT**—The Orange market is overstocked with culls and off stock, sales being slow at low prices. Choice offerings are somewhat limited, bringing top quotations. We quote as follows: California Navels, \$1@2 50; Seedlings, \$1@1 50 box; Mexican Limes, \$7@7 50 box; California Limes, in small boxes, 50¢@75¢ box; Lemons, Sicily, \$3@4; California Lemons, 75¢@1 25 for common and \$1 50@2 50 for good to choice.

**TROPICAL FRUIT**—We quote: Bananas, \$1@2 bunch; Pineapples, \$2 60@6¢ dozen.

**DRIED FRUIT**—Trade is limited, though some movement is in progress all the time.

Following are the prices furnished by the Fruit Exchange. The figures presented represent carload lots, small parcels occasionally selling at slightly lower rates:

Apples—Fancy Moorpark, 8½¢; choice, do, 8¢; fancy, 7½¢; choice, 7¢; standard, 6½¢; prime, 6¢. Apples—Evaporated, 5½¢@7¢; sun-dried, 4¢@5¢. Peaches—Fancy, 7¢; choice, 6½¢; standard, 5½¢; prime, 5¢; peeled, in boxes, 12¢@13¢. Pears—Fancy, halves, 5½¢; quarters, 4½¢; choice, 4½¢; standard, 3½¢; prime, 3¢. Plums—Pitted, 4¢@5¢; unpitted, 1½¢@2¢. Prunes—Four sizes, 1½¢@4½¢. Nectarines—Fancy, 7¢; choice, 6½¢; standard, 6¢; prime, 5½¢. Figs—White, choice, 5¢@5½¢; Black, choice, 1½¢@2¢.

Raisins—In sacks (50-lb. boxes selling at 14¢ lb. higher): 4-crown, loose, 4¢; 3-crown, 2½¢; 2-crown, 2¢; seedless Sultanias, 3¢; seedless Muscatis, 2¢ lb; 3-crown London Layers, \$1 25 box in 20-lb. boxes; clusters, \$1 50; Dehesa clusters, \$2; Imperial clusters, \$3; 4-crown, loose, \$1 15; 4-crown, loose, faced, \$1 25 box. Dried Grapes—1½¢ lb.

**NUTS**—The market is not active. We quote: Chestnuts, 7¢@8¢; Walnuts, 5¢@7¢ for hard shell, 7¢@9¢ for soft shell and 7¢@9¢ for paper shell; California Almonds, 5¢@7½¢ for soft shell, 3¢@4¢ for hard shell and 8¢@9¢ for paper shell; Peanuts, 4¢@6¢; Hickory Nuts, 5¢@6¢; Filberts, 8¢@9¢; Pecans, 6¢ for rough and 8¢ for polished; Brazil Nuts, 7¢@7½¢ lb; Cocoanuts, 5¢@5 50 lb 100.

**HONEY**—Stocks are small, while the demand is light and readily met. We quote: Comb, 10¢@12¢; water white extracted, 7¢; light amber extracted, 5½¢@6¢; dark amber, 5¢@5½¢ lb.

**BEESWAX**—Quotable at 28¢ lb.

**BUTTER**—Prices are very low, but dealers report the market as heavy and against sellers. Creamery—Fancy, 15½¢@16¢; seconds, 14¢@15¢ lb. Dairy—Fancy, 13¢@14¢; good to choice, 12¢@12½¢; fair, 10¢@12¢; store lots, 8¢@9¢.

**CHEESE**—The situation is favorable to buyers, the market being well stocked. We quote: Choice to fancy, 7½¢@8½¢; fair to good, 6¢@7¢; Eastern, ordinary to fine, 11¢@14¢ lb.

**EGGS**—Are weak in price. While store Eggs clean up moderately well, ranch are accumulating

and in heavy stock. We quote: California ranch, 12¢@13¢; store lots, 10¢@11¢ dozen.

**POULTRY**—Turkeys are a shade steadier, receipts being light. Hens and Roosters are also doing better. Some small Ducks are being sent in, which are hard to sell at the lower quotation. Fine Geese are in demand. Live Turkeys—Gobblers, 8¢@10¢; Hens, 10¢@12¢ lb; dressed Turkeys, 12¢@14¢ lb; Roosters, \$3 50@4 50 for old, and \$5 50@6 50 for young; Broilers, \$3@4 for small and \$4 50@5 for large; Fryers, \$5@6; Hens, \$4@5; Ducks, \$4 50@6 50; Geese, \$1 25@1 75 pair; Pigeons, \$2@2 50 dozen.

**WOOL**—Stocks are small, while there is comparatively none coming in. The arrival of Spring clip will have to be awaited before any business of any magnitude will develop. We quote Fall:

Free Northern..... 7 @ 8½¢  
Northern, defective..... 5 @ 7  
Southern & San Joaquin, light and free. 5 @ 6  
Do, defective..... 3 @ 4

**HOPS**—Quotable at 4¢@8¢ lb, as to quality.

## Breeders' Directory.

Six lines or less in this directory at 50¢ per line per month.

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**F. H. BURKE**, 626 Market St., S. F. All Prize Holsteins; Grade Milch Cows. Fine Pigs.

**BULLS**—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

**FRESH JERSEY MILKERS** for sale. Sulphur Spring Farm, Niles, Cal.

**JERSEYS**—The best A. J. C. C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale.

**P. H. MURPHY**, Perkins, Sac. Co., Cal. Breeder of Shorthorn Cattle, Poland-China & Berkshire Hogs.

**M. D. HOPKINS**, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

**PETER SAGE & SON**, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

**JERSEYS AND HOLSTEINS**, from the best Butter and Milk Stock; also Thoroughbred Hogs and Poultry. William Niles & Co., Los Angeles, Cal. Breeders and Exporters. Established in 1876.

## Poultry.

**J. W. FORGEUS**, Santa Cruz, Cal., has the best stocked and equipped poultry ranch on the Pacific coast, and makes a specialty of Barred P. Rocks, Brown Leghorns, Black Minorcas, Pekin Ducks. Seventy acres to Leghorns, six acres to Minorcas, and my home ranch to Barred P. Rocks and Pekin Ducks. I guarantee satisfaction in every order. Exhibition birds and breeding stock. Eggs for sale. Prices reduced to fit hard times. Reference, People's Bank.

**BUFF LEGHORNS**. Eggs from prize winners, \$1. \$2 and \$3 per thirteen. Incubator lots at reduced rates. C. W. Hansen, San Mateo, Cal.

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**WILLIAM NILES & CO.**, Los Angeles, Cal. Nearly all varieties of Poultry. Dairy Cattle and Hogs.

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## 6 YOUNG SHORT-HORN BULLS 6 FOR SALE.

From good milking strains; are eligible to record. I will make low prices to close them out. Also fine young BERKSHIRE AND POLAND-CHINA SOWS, from imported stock.

**P. H. MURPHY**,

PERKINS, SACRAMENTO COUNTY, CAL.

## Jacks and Jennets,

RAISED FROM IMPORTED STOCK, for sale by V. GIANELLA, Honcut, Butte county, Cal.

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In large or small lots, from Barred Plymouth Rock, S. C. Brown Leghorn and Black Minorcas, at 50¢ per doz. MRS. J. G. FREDERICKS, Madison, Cal.



## Brag is a Good Dog: Holdfast is Better.

When you get ready to buy a Cream Separator the best plan is to see some of the machines in practical every-day use.

## The Sharples Russian Separator

Can be found in every dairy neighborhood in the United States; and their owners are never ashamed to show them for they do uniformly good work. We would caution buyers against dairy school work and dairy school reports. They are neither practical and are generally the observations of beginners. What a buyer wants is to know what are the every-day results obtained from a machine when the machine is making money for its owner in a creamery.

## The Bowl Alone Revolves.

This is what a man who makes money thinks of his separators:

DEAR SIR:—As to the Separators, we have been using two Standard Russian Separators for over two years with satisfaction, and think that for simplicity, durability, ease of handling and skimming, they cannot be beaten. I do not speak by guess, as by testing the milk nearly every day by the Babcock method I know they skim clean.

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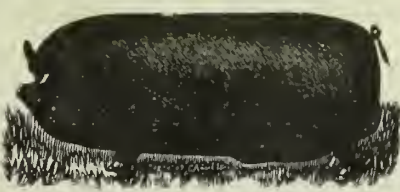
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## BERKSHIRES.

We received many compliments for our herd from visitors at the State Fair. We competed for 13 ribbons and won 11, as follows: 2 special; 2 sweepstakes; 8 firsts; 4 seconds.

We have a few Choice Pigs for sale.

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## MANHATTAN STOCK FOOD

Feed our Poultry Food and you will have healthy chickens and lots of eggs. Ask your dealer for it

## Five Bulls For Sale. SHORT-HORNS.

Good ones; come and see them and you will buy them. Three 16 months old, two over two years old. All sired by the celebrated bull Baron Butterfly; all thoroughbred, and contain good show timber. One of the two-year-olds won First Prize at State Fair in Sacramento, 1893, as a calf. Some of them are of the best milking families. I also have JACKS and JENNETS for sale, pure Mammoth French stock. Intending purchasers met at train, per agreement by letter. Address E. S. DRIVER, Antelope, Sac. Co., Cal. Antelope is on the Overland R. R., 14 miles north of Sac. City.



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Your income by buying an Incubator and engaging in the chicken business. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember the Best is the Cheapest. PACIFIC INCUBATOR CO., 1317 Castro St., Oakland, Cal.

## FRANK A. BRUSH,

SANTA ROSA, CAL. (Care Santa Rosa National Bank.) Importer, Breeder, Exporter.

S. C. White Leghorns, S. C. Brown Leghorns, Barred Plymouth Rocks, Black Minorcas.

Eggs, \$3 per 13. Send for Circular.



## THE HALSTED + INCUBATOR COMPANY,

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## CATALOGUE FREE. SEND FOR IT.



## EGG RECIPE.

Take one postal card, write on its back, "How can I make larger profits on the egg crop?" Direct it to H. K. STARKWEATHER, 310 California St., San Francisco. Drop in postoffice and await prompt answer.

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## HOW TO GROW THEM.

Practical, Explicit, Comprehensive. Embodying the experience and methods of hundreds of successful growers, and constituting a trustworthy guide by which the inexperienced may successfully produce the fruits for which California is famous. Second edition, revised and enlarged. By EDWARD J. WICKSON, A. M., Assoc. Prof. Horticulture and Entomology, University of California; Horticultural Editor Pacific Rural Press, San Francisco; Sec'y California State Horticultural Society; Pres. California State Floral Society, etc.

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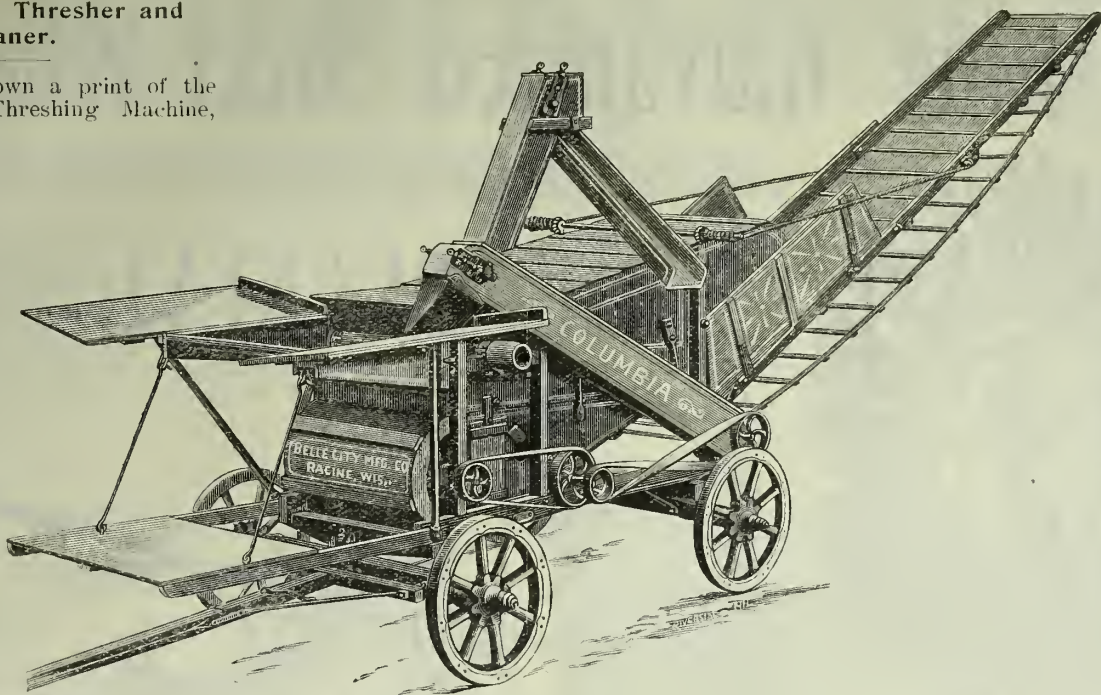






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subjected to the severest trials in varying conditions in all the Western and Southern States, its reputation has been firmly established. On account of its compact form and light weight, it can be taken anywhere that a wagon can, and farmers are beginning to realize the great economy in having a thresher of their own, to say nothing of the wastefulness of large machines and the inconvenience of large crews, which must of necessity follow them. The Columbia will save its cost in one sea-

son, and the saving is proportionately great to neighbors who club together and buy an outfit. We would advise our readers to write for printed matter. At times where several machines can be ordered at once, purchasers would get the benefit of carload freight rates to some common point for re-shipment, thus saving the difference between carload and local rates. Any one interested in these small outfits can have printed matter sent them by writing to Belle City Mfg. Co., Racine, Wis.

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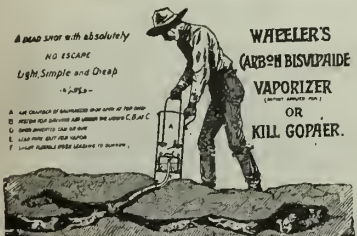
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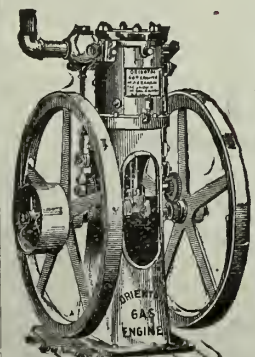
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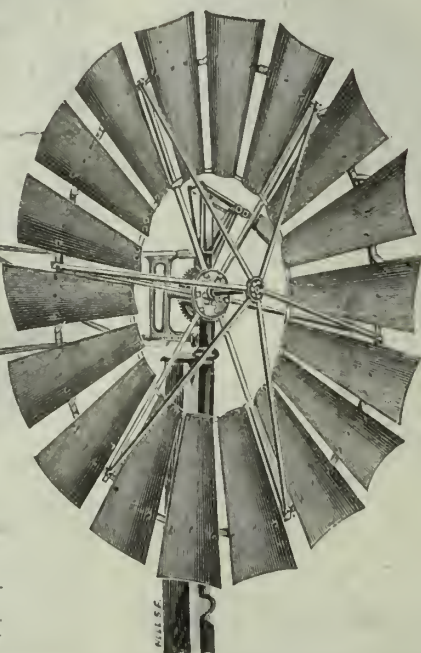
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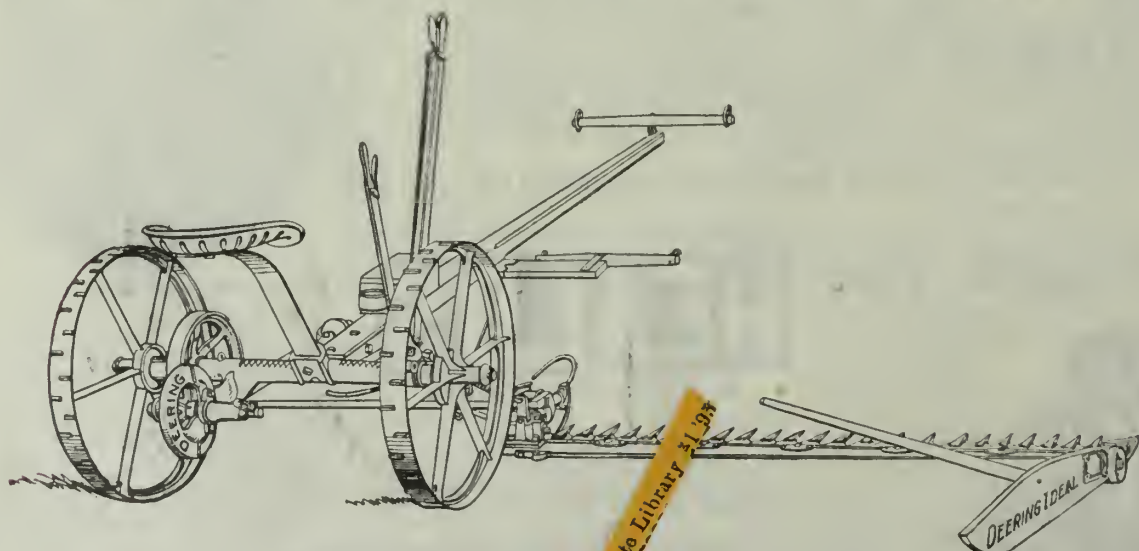
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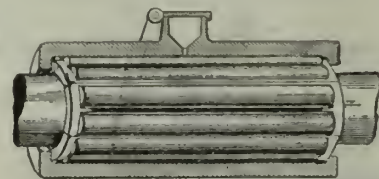
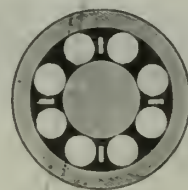
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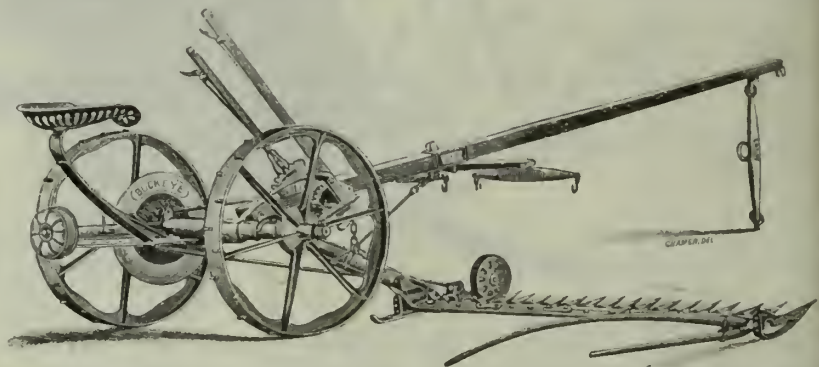
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# THE PACIFIC RURAL PRESS

AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 11.

SAN FRANCISCO, SATURDAY, MARCH 16, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

## Japanese Gardening.

Japan has evidently learned the art of war from western nations and in return has taught them much in the arts of peace. Our peace congress friends will declare that she has taught a good lesson and learned a bad one. We will concede the truth of this claim without argument, for as we look upon the lovely glimpses of Japanese horticulture upon this page our voice is not for war.

The peaceful arts of the Japanese are now popular the world over. Not alone in the houses, but in the gardens of the Caucasian race, Japanese materials and canons of taste are everywhere prevalent. To a certain extent this wide spreading of thoughts and things Japanese is due to the constant yearning of the white race after something new, and the imitation of the Japanese is a fad or a fashion. But beyond this there is something in this latest contribution from the Orient which is beyond the limits of a fad, because it embodies true art principles and will therefore endure and exert a permanent usefulness. During recent years English and American artists and poets have made a study of Japan and the Japanese and concede such possession to them. But here again is a line we do not desire to pursue and we take it for granted.

Whatever may be the final verdict upon the Japanese civilization, and its gifts to the West, there is no doubt that Japanese horticulture is exerting a very wide influence upon our long-accepted modes, and is also furnishing us a vast wealth of new materials. Japanese gardening with its delightful picturesqueness, its artistic use of water and rock, its spirit of restfulness and content, its exquisite neatness, free from hint of garnishment and its profound

popularity of Japanese ideals promises to permanently improve our ornamental gardening.

In a lesser degree, but in a way which is more easily recognizable, we are clearly indebted to Japan for culture plants almost beyond number. Examine

of their own flowers which they themselves cannot now equal. This is a manifestation of the progressive western spirit. Under that impulse we achieve, in a decade, results which would content them as the work of a century, but that does not lessen the value



A JAPANESE PERGOLA OF WISTARIA



TREE PEONIES, AS GROWN IN JAPAN.

sympathy with the longings of a quiet and peaceful spirit—all these are in marked contrast with the ambitious mockery, the garish ornamentation and the distressing formality which make too many of our gardens and pleasure grounds places of torture for true human taste and sentiment. The present

catalogues of our leading propagators and see how great a proportion of the ruling favorites are of Japanese derivation. It is true that in many of these, and notably in the chrysanthemum, we have outdone even the Japanese by our high-pressure system of improvement, and have produced varieties

of their gifts to us; it merely demonstrates the wide importance of them.

Our engravings, which are chosen from the large collection of the Sunset Seed and Plant Co., represent two lines of growth in which our debt to Japan is not as clearly acknowledged as with the chrysanthemum, and yet it is a great one. In the woody peonies, or tree peonies, the Japanese achievements are grand. If true color could but be added to the outlines of the photograph the fact would be more apparent, and yet the imagination will enable the initiated plant lover to paint the delicate hues and tints of these immense blooms which burst from rough and meager stems which would hardly seem adequate to the production of a common peach blossom. And then the delicately beautiful wisteria extending its graceful racemes of white or azure bloom an arm's length from the slender whip-cord vine which sends it forth to glorify the early springtime! Under the wisteria are seen the present representatives of a family which this vine has shaded for possibly more than a single century. These plants, and many more as beautiful, are among the gifts of peace for which we can render thanks to our nearest neighbor on the west.

SANTA BARBARA is pushing preparations for the annual flower festival of 1895 with the usual zeal and interest. The event will begin on Wednesday, April 17, and close Friday evening following. A very tasteful souvenir announcement has been issued, representing in colors the lovely maidens of the seaside town on a decorated float indulging vigorously in the battle of the flowers. Copies of this, we presume, will be sent to all applicants who address the secretary, Walter Lord, of Santa Barbara. This year has been a very favorable one for the growth of bloom and profusion of beauty beyond the record may be expected by this year's visitors.



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ALFRED HOLMAN.....Editor.  
E. J. WICKSON.....Special Contributor.

San Francisco, March 16, 1895.

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## The Week.

**Weather and Crops.** Clear weather has prevailed another week and forecasted showers have been exceedingly light, even on the coast. A drying wind has also prevailed, and, for the most part, rather low temperatures. The result has been slow growth of grass and grain, and leisurely advancement of fruit trees. It is perhaps just as well that such should be the course just at this season. In the drier regions of the interior moderate rain would now be very welcome and would hardly come amiss anywhere, though it is still early and nothing is suffering yet.

**State Board of Horticulture.** It is reported from Sacramento that the Assembly bill drawn to terminate the life of the State Board of Horticulture has been revoked by its author. If the Board's representatives at Sacramento can convince the Legislature that its work is worth an appropriation, it will be able to proceed. This ought not to be a difficult task. It is clear enough that features of the Board's work like the quarantine, the holding of conventions and its publications should be provided for. They have been of great benefit to the State. If the Board has done unwisely in some respects and has alienated some sections of the State, that is a matter which the future may atone for and is not good ground for the abolishment of the Board. We hope that necessary funds will be supplied for its use.

**Nevada Irrigation.** Nevada proposes to avail herself of the chance offered in the Cleary act of Congress, by which each of the arid States was allotted 1,000,000 acres of land by the general Government, provided they took the necessary steps to reclaim it within a period of ten years from the passage of said act. A bill will be introduced in the Nevada Legislature to create a water commission, the duties of which will be to make surveys, pick out lands suitable for reclamation and suggest the necessary steps to put the State on an agricultural basis. The Government sells this class of land at \$1.25 per acre. It is estimated that the proceeds of the 1,000,000 acres which are given to the State, sold on the basis mentioned, would probably pay for the necessary work of irrigation. But if the cost exceeds that figure, it is claimed that it would be an easy matter for the State to dispose of the land at five times the price mentioned if a certain supply of water could be assured. This, of course, is figuring upon the actual returns to the State in cash provided it undertakes the work, and does not take into consideration the wonderful impetus it would give every conceivable branch of

business through the immigration which would necessarily follow and the general development which would take place. We shall be glad to see Nevada realize her hopes in this direction. California has the same chance for speculation if she sees fit, but there will probably be a good many views as to the desirability of such an enterprise, in this State at least.

## Protection to Honest Dairy Produce.

The dairy law, which we mentioned in last week's RURAL as having passed the Legislature, has received the Governor's signature. It is for the purpose of preventing deception in the manufacture and sale of butter and cheese, and appropriates \$12,000 to promote prosecution of those who transgress its provisions during the two years ending July 1, 1897. The law declares that everything which is made in the semblance of butter by the use of any materials except milk and cream, is an *imitation butter*; also, that anything made in the semblance of cheese by the use of anything except milk and cream, shall be *imitation cheese*, except that the use of salt and coloring matter does not constitute an imitation product, and cheese made from pure skim milk is not in the intent of the law an imitation cheese.

It is also provided that no person shall manufacture or offer for sale or serve in any place of public entertainment any "article, product or compound made wholly or partly out of any fat, oil or oleaginous substance or compound thereof, not produced directly and at the time of manufacture from unadulterated milk or cream from the same, which article, product or compound shall be colored in the imitation of butter or cheese," unless such article is branded "substitute for butter" or "substitute for cheese" in letters not less than one inch high and an inch wide, and shall prepare also a printed statement, giving name and address of manufacturer, which shall be enclosed in each package, and shall put the same statement on the top and side of each package. It is also unlawful for common carriers to receive or transport packages of the substitutes not so marked; nor can any person have in his possession, except for his own family use, any such unmarked package.

It is also unlawful for any one to take orders for these substitute articles under the name or pretense that the substance is either butter or cheese; nor shall any one sell the same, unless he informs the purchaser that the substance is a substitute for butter or cheese; nor shall he use, in selling or advertising the material, the words "butterine," "creamery," "dairy," nor shall he use a representation of any breed of dairy cattle, or any other words or symbols commonly used by the dairy industry in the sale of butter or cheese.

No one shall serve these imitation products in any eating-place nor in any place where board is given as part compensation for labor, without informing the consumer that he is being given an imitation product; this information must be both by printed statement and verbal statement.

Those who sell such goods with intent to deceive cannot recover the value thereof from the purchaser. Those who have unmarked imitation products in their possession are supposed to know their character and the removal of brands or marks shall be evidence of intent to deceive.

The violation of any provision of the law shall be a misdemeanor punishable by a fine of not less than \$50 nor more than \$250, or by thirty days' imprisonment.

A second offense shall incur a fine of not less than \$250 or imprisonment not more than six months, or by both such fine and imprisonment. One-half of all fines collected shall go to the informant.

These provisions of the law which we have given in outline seem to be armed at every point with requirements which will make it exceedingly difficult, if not impossible, either to make or sell an imitation article without giving information of its true character, and the provisions give the trade under false pretenses such danger that it is likely to be abandoned. This point might not be conceded were it not that the law proceeds to develop a prosecuting force both of men and money to carry its provisions into effect. The weakness of the earlier movements of the dairymen of California against these bogus products has lain in the lack of prosecution. The Governor of the State is now empowered to immedi-

ately appoint "three residents of the State who shall have had practical experience in the manufacture of dairy products to constitute a Dairy Bureau." These men shall serve without compensation, shall have power to appoint an agent at \$1200 a year and such assistants or chemists as from time to time may be necessary. It shall be the duty of the Bureau to secure as far as possible the enforcement of this law. There is also given a line of procedure by which samples of suspected products may be obtained and cases of misdemeanor brought to the attention of prosecuting magistrates.

Such in its general features is the new law. As just said, it has machinery to push forward detective and prosecuting movements. It will be exceedingly interesting to see how its battle will begin. The appointment of the three Bureau men may be soon expected. It is to be hoped that they will be shrewd, energetic men, well supplied with executive ability, for upon the choice of the right men depends the whole issue. It will be no boys' play to catch the offenders nor to hold them against the sharp legal practice which a wealthy oleomargarine interest will bring to the test of the new enactment.

## Mr. Stubbs' Letter.

We print on another page the reply of Vice-President Stubbs, of the S. P. R. R. Co., to the appeal recently made by a committee representing the fruit growers of the State. This appeal—which was printed in the RURAL PRESS of the 2d inst.—reviewed the conditions of the fruit industry, and asked specifically:

- (1) For a five-day ventilated car service between Sacramento and Chicago in some manner guaranteed.
- (2) A concession of at least \$50 per car from refrigerator companies.
- (3) A \$1 rate to Chicago guaranteed for eight-day service.
- (4) That carload lots of fruit for Eastern shipment be hauled to points on main line on a basis of through rates, instead of local rates.
- (5) That ten tons be made the minimum amount of cherries to be loaded in refrigerator cars.
- (6) We ask that mixed cars of dried and canned fruits and nuts be accepted by your company, each variety paying its own rate, instead of the highest rated article establishing the rate for the entire car; and that a similar concession be made on mixed cars of fresh fruits and vegetables.
- (7) We finally ask, owing to the woeful depression of the raisin industry, that an emergency rate of seventy-five cents be given on the raisin crop of 1895.

In answer to these requests, presented in the most civil terms, the fruit growers have a long letter from Mr. Stubbs, in which their committee is soundly lectured for exposing the facts of the fruit situation. They have, Mr. Stubbs declares, done California a grievous injury in representing that there is a crisis in the fruit industry in California; besides, he undertakes to say, the growers don't know what they are talking about. Proceeding from this point, Mr. Stubbs presents the usual mess of figures and phrases which railroad officials delight in but which have no bearing upon the subject, and finally comes down to a "smart" denial of all the requests presented by the committee.

This letter is an offense to the fruit growers of California, not more in its denial of their demands, than in its rudely lugged-in discussion of irrelevant matters. As to the point of making public the condition of the fruit industry—that was none of Mr. Stubbs' business. As to the effort to demonstrate that the growers do not understand their own situation this is a wanton affront. As to the main point of denial—it might as easily have been done civilly as with vulgar smartness.

Running over the whole long course of negotiations between the railroad people and the fruit growers, we do not recall an instance in which the latter have been so badly used. This experience makes it very plain that in dealing with the Southern Pacific Railroad Company some method other than frank discussion of mutual interests must be employed.

We print Mr. Stubbs' letter in full because we wish to be entirely fair. If it has small relation to the great fruit problem, it shows at least the utterly unsympathetic attitude of the railroad authorities. In reading it we have been led to wonder why it was that the railroad company sent its agents to the Sacramento convention and why they invited the conference, since it would have been less an offense to have treated the growers with absolute contempt from the beginning.



## From an Independent Standpoint.

At the meeting of the Legislature two months ago there was a very general hopefulness respecting the prospects of the session. The greater number of its members had been chosen since the era of hard times came upon the country, and were under pledge—at least by implication—to reduce State expenses. The moral awakening which in the November election brought about the overthrow of the bosses at San Francisco, it was believed, could not fail to find effective representation in the legislative halls. Again, the conditions of the State with reference to industry and transportation were such as could not, it was believed, fail to rouse the patriotic spirit of the law-makers. It was hoped that, under the influence of such a combination of motives, we should have a Legislature whose labors would be a public benefit. How rudely these hopes have been disappointed it is hardly necessary to say. The early days of the session were marked by flagrant extravagance and corruption in the matter of legislative employees, the clerks, copyists, messengers, etc., soon far outnumbering the legislators. This beginning marked a character which has been retained throughout the session. It has been, in fact, a session of scandals so shameful as to make honesty blush for the degradation of California. From the beginning there has been in close attendance upon every hour of the session such notorious corruptionists as Chris Buckley, Sam Rainey and others; and there has been scarcely a pretense of concealing the fact that they are the directors of organized bodies of "cinch" bill operators in both chambers.

The methods of these organizations are very simple. Under the management of some such manipulator as Buckley, a body of members agree to work in harmony, obeying orders from the boss when to vote yes and when no, he in the meantime bargaining with the corporations for the votes of his gang. At the end of the session the price of this villany is divided among the members of the gang, the boss taking a large share for his work as manager. How effective such work as this is where, as in the present instance, the gang numbers a majority of one or the other chamber, does not need to be told. Under such conditions the boss is absolute master of the situation; he can promote or defeat any measure at his will, and the public is powerless.

The boss has an easy way of bringing the corporations to the point of supplying money. All that is required is to present a few "cinch" bills—that is, measures designed to injure the railroad companies, the water and gas companies, the insurance companies, etc. The interests threatened quickly take the hint; they send agents to Sacramento, buy up the boss and his gang and dictate their course in all matters in which their special interests are threatened. Thus it is that the railroad always controls the situation. It secures the gang by large payments and thereafter can destroy what or whom it pleases and can have anything it wants. For its expense in protecting itself against "cinch" bills it recoups by such gross legislation as it frequently enforces for its own advantage. This game has been worked as usual during the present session; the railroad, as the saying goes, "has owned everything;" all measures in opposition to its interests have been buried and all measures in its favor have been pushed ahead. Buckley, Rainey, et al have sat in the lobby and directed the proceedings in conformity with instructions received from their corporation employers. All went swimmingly until Tuesday of this week, when a Senator, outraged and goaded beyond endurance, called upon the people of California to witness the infamy of these organized plunderers.

The occasion of this outburst was in connection with a bill to repeal a law of 1874 which limits street car fares to five cents and provides certain regulations regarding transfers. It was a proposition purely in the interest of the street-car combine in San Francisco, unsupported by any consideration of public interest and dependent for promotion wholly upon the forces of the lobby. But this dependence seemed quite sufficient, for at every point it had the solid twenty-two votes of the "gang." In this situation, seeing the efforts of honesty and decency beaten at every turn, Senator W. J. Biggy, in the

spirit of desperate indignation, made a direct assault upon the organized forces of corruption. In the course of his remarks he said:

I understand that there is a combine in the Senate of twenty-two members, hirelings of the Southern Pacific Railroad Company, and I dare them to pass this bill. I am prepared to make a disclosure that will startle you.

This made a prodigious stir and there were excited efforts to silence the speaker, but he went on:

At the last session of the Legislature I had not been here more than a week when I was offered \$7000 to stand in with a combination for everything there was. This session I was again offered, on the floor of the Senate, the same proposition, but the sum was \$8000, which I refused, and I can prove my accusations.

If a bomb had been exploded it could hardly have made a greater sensation. The proceedings came to halt and a little later the session for the afternoon adjourned. Efforts to smooth over the matter failed, for Biggy's blood was up. Privately he repeated all that he had declared in the Senate, adding to it specific incidents and the name of the man who had attempted to bring him into the pool of corruptionists. He said:

Two years ago I had my first experience in legislative work. My attention was no sooner given to its duties than I learned something else I had not known before. On a Wednesday, when I was on my way to lunch, I was approached by a Senator, the same who approached me this session on the same mission, Senator Dunn. He broke the matter to me gently. He told me that there was an opportunity to make some money here, and that no one would be the wiser for it. He said that it was customary in the Legislature to form a combination for the purpose. I asked him what he meant, telling him that I thought he knew my position in San Francisco; that my friends had regretted my election, fearing that I would become involved in one of the scandals similar to many which had disgraced the Legislature.

I told him that I had been raised in my district, that I had resided there for thirty years, and that I could not afford to disgrace my action to those who had elected me to my place in the Senate.

He mentioned the Southern Pacific Railroad to me as giving one of the opportunities to make money. That was only one, he told me. There were others. Again I explained my position to him and refused to discuss the affair further with him. He said that at least \$7000 could be made at the session for every man in the combination.

I told him I would have nothing to do with the affair and left him. At the opening of this session he approached me in my seat in the Senate again. He told me that he hoped I did not intend to be the same fool that I had been two years ago. I replied that I did not think that I had acted in that capacity.

Dunn persisted in explaining once more to me. He told me that at this session a combination of twenty-three Senators had been formed, and that there were to be between \$7000 and \$8000 in it for each of them. He said if I knew their names I would fall down in surprise. I replied that I did not know who were in the combination, and didn't want to know. During the conversation he mentioned the railroad, gas, water, telephone, telegraph, and several other companies which would furnish money. My conversation with him ended there.

The immediate effect of Biggy's disclosure was to defeat the street-car bill, for eight of the gang took alarm and voted in direct opposition to their former action. Another effect was the adoption of a resolution for investigation, but of this not much is expected, since some of the investigators at least are members of the gang. It is said, also, that the Sacramento grand jury, now in session, will take cognizance of the matter. Senator Dunn, who thus stands directly charged, is universally believed quite capable of any infamy. He is an old member of the Legislature, selected by boss methods for just such service as he is giving in this session. He has an unsavory record, having once been arrested in this city upon a charge of attempting to bribe a juror in a murder case. Senator Biggy, also of San Francisco, has the character of stubborn integrity, and has stood almost alone among the delegates from San Francisco outside the list of known corruptionists.

What the Senate will do with Mr. Biggy's charge cannot be foretold, but it ought to have the effect to wake up the people of California to the condition of its legislative department. We have in the Legislature such men as Dunn and his associated scoundrels because we allow such as they to control our political conventions. We allow the most pushing and shameless among us to name the candidates; we too often swallow the party ticket whole; and then we wonder why it is that extravagance and infamy rule at the State capital. Vigilance is just as much the price of liberty now as ever it was; and if we are too indolent or indifferent to pay the price, we must expect to suffer the penalty. Just so long as we allow the Burnes, et al to rule the conventions; just so long as we feel bound to the "yaller dog" principle of voting, just that long must we endure such government as Chris Buckley, Sam Rainey, and such as they, find it to their interest to give us.

It is declared that the sum total of the appropriations made by this Legislature will be about

thirteen millions of dollars. A very large proportion of this vast sum is included in the general appropriation bill upon which the Governor has yet to pass. Under the law he can veto any item in it; and in this power he has a very great opportunity. The interests of the State coincide with his pledge to the people to hold the expense account down. Now is his chance—let him, if he would do a great public service, veto every item which is not vital to the interests or to the business integrity of California. Let him show California how her State Government can get along for two years at least on plain necessities and without frills. It is not a time for new buildings at San Francisco, Berkeley or anywhere else; it is not a time for military picnics at the public cost; or for scientific experimentation of doubtful value. Our people are doing without luxuries and living close to the lines of actual necessity; it is right that the State should do the same. Let the Governor make severe use of the veto power, and however much he may enrage the politicians, he will have the approval of the people.

## Rainfall and Temperature.

The following data for the week ending 5 A. M., March 13, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week. | Total Seasonal Rainfall to Date. | Total Seasonal Rainfall Last Year to Same Date. | Average Seasonal Rainfall to Date. | Maximum Temperature for the Week. | Minimum Temperature for the Week. |
|----------------------|------------------------------|----------------------------------|-------------------------------------------------|------------------------------------|-----------------------------------|-----------------------------------|
| Eureka               | 21                           | 32 61                            | 14 92                                           | 13 82                              | 52                                | 34                                |
| Red Bluff            | 12                           | 24 41                            | 18 43                                           | 20 08                              | 74                                | 38                                |
| Sacramento           | 21                           | 54                               | 13 83                                           | 16 02                              | 68                                | 40                                |
| San Francisco        | 02                           | 21 99                            | 16 06                                           | 19 55                              | 60                                | 40                                |
| Fresno               | 06                           | 10 25                            | 6 13                                            | 8 92                               | 70                                | 44                                |
| Los Angeles          | 11                           | 49                               | 6 30                                            | 16 01                              | 66                                | 44                                |
| San Diego            | 10                           | 09                               | 3 92                                            | 8 61                               | 62                                | 42                                |
| Yuma                 | 2                            | 97                               | 2 16                                            | 3 03                               | 82                                | 46                                |

## Gleanings.

SAN JOSE shipped nearly 3,000,000 pounds of dried fruit last week.

RUCKER, the new settlement north of Gilroy, is having a tree-planting boom.

THE Horticultural Society of Visalia is to be resuscitated. On the 16th of March a meeting will be held at the city council room for the purpose of fixing prices for labor in handling fruit the coming summer.

SAN JOSE *Mercury*: "Altogether, the outlook for the orchardists, so far as the crop is concerned, was never better. As to prices, it is yet too early to venture an opinion. While a large crop would ordinarily tend to lower them, there is good ground for believing that they are more likely to advance beyond the prices of last season than fall below them."

HEALDSBURG *Tribune*: Nurserymen say that the number of orange trees planted out in the vicinity of Healdsburg this year exceeds that of last year. Nobody, however, has gone to the extent of engaging in orange growing on a large scale, but in the course of two or three years orange orchards will by no means be a scarcity in the valley, from the rate the farmers are taking hold of the industry at present.

NEVADA COUNTY *Herald*: Felix Gillett, proprietor of the Barren Hill Nurseries, has sent a consignment of fruit trees to Grand Junction, Col. They were sent by express. We are informed that Mr. Gillett has many customers in Colorado. Trees grown at this altitude are more hardy than those grown in the valleys, and are thus better suited to the climate of Colorado, much of which is similar to that of Nevada county.

THE *Kern County Echo* reports that the sheep shearers have organized a union and are fixing rates at which they will work. They demand a rate of five cents a fleece, and board, while the bosses of the shearing corrals have fixed the rate at five and a half cents a fleece and take fifty cents out for board. Wool is not bringing a very high price this year and there is a possibility that some of the sheep men will not be able to pay for shearing at all.

DATES for holding district fairs have already been claimed as follows:

|                                   |                      |
|-----------------------------------|----------------------|
| P. C. T. H. B. A. Summer meeting. | July 22 to July 27   |
| Golden Gate Association.          | July 28 to Aug. 3    |
| Vallejo Association.              | Aug. 5 to Aug. 10    |
| Napa Association.                 | Aug. 12 to Aug. 17   |
| Petaluma Association.             | Aug. 19 to Aug. 24   |
| Woodland Association.             | Aug. 26 to Aug. 31   |
| State Fair, Sacramento.           | Sept. 2 to Sept. 14  |
| Stockton Association.             | Sept. 16 to Sept. 21 |
| San Jose Association.             | Sept. 23 to Sept. 29 |

VACAVILLE *Reporter*, March 9th: That the coming season will be an early one is demonstrated by the fact that already ripe cherries are to be found in some localities in the valley. Last week one ripe cherry was found on one of J. M. Bassford's trees, and unfortunately (much to the disgust of the foreman) it was plucked and eaten by one of the workmen. Since that time, however, several others have ripened, and



now we can boast of having ripe fruit ready for the market, although the amount is small. On Monday a box was sent to Assemblyman Bassford in Sacramento, where they will tempt the law-makers. In another week or so several boxes will be ripe enough to be sent to San Francisco and Eastern markets. Ripe deciduous fruit in the first part of March has once again demonstrated the earliness of fruit in this section.

The annual report of the Sutter Fruit Growers' Shipping Association declares that the Association shipped thirty-six carloads of fresh fruits loaded at Yuba City. One car was lost in the strike, leaving thirty-five cars which reached the Eastern markets. Eight cars went through Porter Bros., and twenty-seven were consigned to the Earl Fruit Co. Twenty-seven cars went to Chicago, seven to New York and one to Boston. The gross sales on twenty-one cars of which a record was kept amounted to \$18,866.10—an average of \$898.38. After deducting freight and other expenses and commissions this leaves an average net return of \$365.49 per car—about 35 cents per package of 20 pounds. The following named officers have been elected to serve for the ensuing year: President, B. F. Walton; secretary, H. P. Stabler; directors, B. F. Walton, H. P. Stabler, R. C. Kells, J. B. Wilkie, F. Hauss, T. B. Hull and Mrs. J. E. Starr.

**MADERA Mercury:** A sight that would have made the eyes of an Eastern farmer—who imagines he has a large farm if he has 100 acres under cultivation—open wide with astonishment was to be seen last Tuesday on the Miller & Lux land about three miles from town. A half section of land was being plowed by Tom Tyner, who was in a hurry to get the land in proper shape. There were thirty-five plows all going at once, being drawn by six, eight and ten animals. It required 280 horses to do the work. Five harrows, making a combined one eighty feet in length, followed the plows, forty-two horses being required to pull the harrows. It was a grand sight when the horses began to move, the plows throwing up great clouds of dust and leaving a black path of newly turned earth. The land was being plowed at the rate of nearly a half section a day.

**CHICO Chronicle-Record:** In regard to the telegraph dispatches stating that a wealthy Chinese syndicate has leased many of the orchards in northern California, the Gridley Herald says: "Last year two of the largest orchards near Gridley were rented to Chinese. They employed none but white labor to cut fruit for drying and paid equally as good wages as the orchardists in the vicinity. They claim that it pays better to employ white labor for this purpose. Should a cannery be built in this vicinity, some of the stock may be owned by Chinese, but the superintendent will be a white man and the employees will also be white." It is indeed a queer state of affairs when Chinese make better bosses than Americans.

**OROVILLE Mercury:** Railroad Agent Dixon says that there have been forwarded this season by rail as freight 4470 boxes of oranges, aggregating fifteen carloads. By express (the figures being furnished by Agent Parke) were shipped 103,625 pounds, or 1661 boxes, equaling five and a half carloads. From Palermo, according to the latest figures received, about thirty-five carloads have been shipped. Thus, taking into account the supply furnished to dealers and consumers not shipped by rail and the product yet on the trees, the total product of the orange groves adjacent to Oroville may be safely placed at sixty carloads. These shipments were made to various parts of the United States and California and everywhere met with ready sale, most of them long before the southern California fruit was marketable. The reputation of the Butte county orange is now thoroughly established, and as time rolls on and the many hundred acres of young trees come into bearing, the number of carloads annually shipped will be counted by the thousands and will give the means of livelihood to a large population.

**VACAVILLE Reporter:** Notwithstanding the apparently favorable condition of the weather for setting fruit, the apricot bloom seems to have met with some sad affliction in this valley. This is particularly true with old trees. The blossoms came out in fine shape and as a rule were loaded, but something seems to have killed them, for the whole blossom is falling from many trees. Many trees are almost denuded of buds, while others have only a few scattering ones. The young trees have set well and firm; and judging from the present condition, they will have a good crop. But as there are not many young apricot orchards in the valley, the crop of this particular fruit will be very small in this section. A high estimate would be a half crop, and many claim there will not be one-fourth as much as was raised last year. The peach trees, however, have set very satisfactorily and the buds are very well and evenly distributed over the trees. If nothing prevents from now on, a good crop will be picked. Almond and Tragedy prune trees are loaded with blossoms, and the prune trees in general look very promising at present; but as they are very unreliable, even after the fruit is quite large, there can be no safe estimate placed at present. If the present favorable conditions of the weather continue a few weeks longer, it will rush fruit along very rapidly and the markets will be supplied fully one month earlier than last year.

**FRESNO Dispatch, March 7th:** A meeting of raisin-growers was held to-day in this city and definite action was taken toward the organization of a number of co-operative packing houses in this county to handle this year's crop. No commission packer is allowed to belong to the organization. It is strictly for growers. The plan is to pack and sell their own raisins, and promise has been made that local banks will furnish all the money needed to build packing houses and supply the needy growers with advances. All of these associations are to be independent of one another except in the one important matter of selling. One central committee will have absolute control of all sales, will make prices and will regulate the styles of packing. A new feature in this plan is that the proceeds of every ton of raisins sold will be considered community property, and be divided pro rata among all growers who belong to any of the associations. Each individual's goods will lose their identity, and the man who raises ten tons will receive the same price as the largest grower, provided the quality is the same, and provided his goods are packed at the same time. A mass-meeting of growers is called to meet in this city March 16th, at which time the draft of a plan for selling, together with by-laws to govern each packing house, will be submitted for approval. It is intended that each packing house shall be as nearly independent as possible, but all must have the sales absolutely to the committee appointed for that purpose.

### All Requests Denied.

The Southern Pacific Declines to Concede Anything to the Fruit Shippers.—Letter from Vice-President Stubbs.

Following is the full text of a letter from Vice-President Stubbs of the S. P. R. R. in answer to requests presented by the Weinstock committee in behalf of the fruit shippers of California:

SAN FRANCISCO, March 7, 1895.

Messrs. Frank H. Buck, Vacaville; D. T. Fowler, Fresno; H. P. Stabler, Yuba City; J. Z. Anderson, San Jose; B. F. Walton, Yuba City; George D. Kellogg, Newcastle; H. Weinstock, Sacramento, Committee on Transportation, Fruit-Growers in State Convention, at Sacramento, November 20, 1894—GENTLEMEN: The communication of date February 20, 1895, which was presented by you and read to the officers of this company, and afterwards published in the morning papers, has had most earnest consideration.

We are constrained to think that the publication of your statements, which were prepared for and submitted at the conference, was unwise and more likely to retard than promote the prosperity of the fruit-grower, the transportation interests and the State. You will no doubt recall that the discussion following the reading of your paper drew out information which, by the acknowledgement of at least some members of your committee, put a different aspect upon some of its statements.

Without commenting upon what might be regarded as unusual and inconsiderate in the publication, pending its consideration, of an ex parte statement which was addressed and submitted to one whose interest in the general question treated of stands confessed by the document itself as quite as great as the interest of those represented by the authors of the document, unaccompanied by the modified explanations made during its discussion, may we not suggest without offense (for there is no offense intended) that it is scarcely calculated to promote the future welfare of the fruit-growers, the State and the carrier to scatter throughout the length and breadth of this continent statements unaccompanied by more evidence than your paper presents, to the effect that what is fast becoming, if not already is, the paramount industry of California, is in a deplorable condition, that a crisis has been reached, a crisis which threatens the future welfare of the State, the fruit-growers and the carriers.

For aught to the contrary contained therein, the paper of your committee when read by the shivering farmer in the Eastern States will picture the east army of fruit-growers in this State as on the verge of financial ruin, and will bring to him the first glow of content since he mournfully viewed the returns for his wheat, marketed at from 42½ to 50 cents a bushel, and found that the gross product of his year's labor ranges from \$6 to \$10 per acre cultivated. Is it not certain that he will at once dismiss all thoughts of removal to California for the purpose of bettering his condition? Has the State been benefited and the interests of the fruit-growers been promoted or injured by the dissemination through the press of such statements? Is it not time for Californians to cease belittling their State and its resources? If a little eloquence was regarded necessary in presenting the statements submitted by the committee to the railroad company as facts, was it necessary or wise to publish it so that it might go to the uninformed with its exaggerating influence wholly unqualified?

Upon what are these woeful conditions and discouraging apprehensions founded? Simply the experience of shippers of fruit to the Eastern States during 1893 and 1894. The previous years of unexampled prosperity and, in many instances, extraordinary profits to the fruit-growers of California are utterly ignored, and the future is measured by the experience of the last two years, which were years of unprecedented financial and commercial depression throughout the country, when armies of men were without work and scarcely knew where to look for bread, and during which every employer was under the utmost strain of economy, the pressure being so great that even men commonly regarded as in good circumstances carried their economical measures into their personal habits, doing for themselves what they were accustomed to employ others to do for them.

Our reports from the fruit-distributing centers of the Eastern States, Chicago and New York, which come from the merchants who distribute the fruit to the consumers, are uniform in stating that for 1893 the chief cause of low prices for fruit was the widespread economy of living forced upon the masses of the people and extending to those in what might be termed the middle class in point of means. To this was added a plentiful supply of the Eastern product. For 1894 the Eastern product was not abundant, but the strain of economy was bearing more heavily upon the mass of consumers and was greatly increased by the paralyzing of trade during the midsummer months by the almost universal, inexcusable and destructive railway strike.

Your committee submitted with its statements the returns of sales of fruit shipped to various Eastern points by several fruit-growers and shippers, as representative of the great body of producers. We have carefully analyzed those of the returns submitted which are most nearly complete and for the largest body of shipments. They were submitted as representing that portion of the product of 300 acres of fruit which was shipped to the Eastern States—108 carloads—the return to the grower being \$22,755.36, or at the rate of \$78.55 per acre.

To ascertain the net result to the grower there is charged against these returns the cost of picking, packing, boxes, paper and loading into cars, at the rate of \$100 per acre, which, not having any information to the contrary, we presume to be not overstated, and again as the cost of pruning and cultivating 300 acres, \$25 per acre. Assuming both of these estimates to be fair, your committee makes a showing of net return to the grower on 300 acres, from that portion of the product which was marketed in the East, of \$4455.36, or at the rate of \$14.85 per acre.

We understand, however, that in the document entitled "The Resources of California," carefully prepared by authority of law for distribution at the World's Fair at Chicago, the statement, made upon the authority of A. T. Hatch, represented to be one of the largest and most enterprising fruit-growers in the State, that the cost of pruning and cultivating a fruit orchard for the fourth year, presumably the maximum, is placed at \$15 per acre. We have also found, from the books carefully and systematically kept for a fruit ranch similarly located to the one under analysis, the showing of actual cost for pruning and cultivating for the fourth year to have been \$6.90 per acre. Accepting the average as being the mean between the estimate of so experienced and well known a grower as Mr. Hatch, and the actual demonstration by books kept for that purpose on an equally well managed ranch, it would place the cost at \$11 per acre, or a difference of \$14 per acre between this average and the estimate made in the showing presented by your committee. Adding this \$14 per acre to the \$13.85, net return to the grower, we have a showing of net profit to the grower of \$27.85 per acre, and this during the disastrous year of 1894. What producer in the Eastern States,

or in any of the adjoining States and Territories on the Pacific coast, or merchant or manufacturer or railroad company within the State can make an equally favorable showing for the year 1894?

It will be observed that there is no credit to the ranch for other products or from sales of fruit in local markets. There may have been none, but that would seem to be unlikely, and in our judgment a thorough and complete analysis of the cost of operating the ranch would show a net return during the year 1894 of somewhere in the neighborhood of \$30 per acre. It would be far more pleasing to the officers of this company if this showing could be made to have been \$300 per acre net, and, if it were, the charges for the transportation of the fruit to the East would not be increased, nor would the company cease its endeavors to improve its service or in every reasonable way to extend the facilities and cheapen the cost of marketing California fruit in the Eastern States.

We further find that the 108 cars referred to were marketed in the cities of Omaha, Minneapolis, Chicago and New York, and one car in the city of Montreal; that in nearly every case the contents of a carload, whatever the nature of the fruit, were sold in several different lots and the prices differed with each lot sold. For one carload of pears to New York City the prices ranged from 65 cents to \$1.60 per box; for one carload sold in Omaha, from \$1.05 to \$1.75 per box; and for a carload of peaches marketed in Omaha the prices ranged from 25 cents to 75 cents per box. The returns of sales bear occasional inferences to the effect that "goods were in poor condition," "fruit dead-ripe," "over-ripe," and in some cases "boxes broken" and "no good," but in the main there was an absence of these notations, so that it may be taken that upon the whole the goods reached their destination in average condition.

We cannot account for the difference in the prices except upon the theory of difference in quality and internal condition of the fruit. It certainly seems fair to presume that the maximum price was obtained for the goods of the finest quality and in the most nearly perfect condition, and that the lower prices were attributable to inferior quality or condition, and that the difference in quality and condition originated on the ranch. Certainly for the most part, the price for the transportation of the fruit and the manner in which it was handled had nothing to do with the price obtained, and it is equally evident, unless the supply was greater than the market would take, that had it all been of the same quality and in the same condition as that which brought the maximum price, the maximum price would have been obtained for the entire carload, in which event a very handsome increase would have been netted to the grower.

Your committee is pleased to state, for which we are duly grateful, that it is "not of those who unwisely and unintelligently lay the entire responsibility for the serious loss involved at the doors of the railroad company." On the part of the railroad companies we must deny any share whatsoever in the responsibility for the alleged serious loss involved. The railroad companies are certainly not chargeable with responsibility for the hard times. They certainly are not responsible for the railway strike, nor the inadequacy of the enforcement of the laws of the land. They certainly are not responsible for the decay of the fruit, nor for the indiscriminate and unsystematic methods employed by the producers in shipment, which results in the glutting of markets. Previous to the year 1894 there had been some attempts upon the part of the fruit growers to regulate shipments under the organization known as the California Fruit Union, and while it is popularly supposed that that organization failed in the accomplishment of the utmost benefit to the producer, yet the annual reports of its managers show that in so far as the growers and shippers of California fruit co-operated in systematic shipments and distribution of the fruit between the several markets in the East handsome returns were netted. The California Fruit Union dissolved, according to our understanding, with 1893, and in 1894 the shipment of fruit was unregulated and unsystematic upon the part of even the few who had formerly co-operated in that organization.

It is stated by your committee that there has been no reduction in the freight charges on green fruit in several years past. As a matter of fact, while it may be said that there has not been a reduction in the rate of freight, there has been a very great increase in the amount and cost of the service performed by the railroad companies without any adequate increase in the charge. For example, when the \$1.25 rate was adopted the railroad companies felt, and still feel, that they had reduced their charge in the minimum, because that rate, taking Chicago as a basis, averages but one cent per ton per mile on the load carried for a haul over five ranges of mountains on roads whose gradients and curvatures exceed in difficulty and cost of operation those of any other roads in the United States, through sparsely populated countries having no local business, but which must depend for support on the through traffic, where for a considerable part of the distance the cost of the fuel is from three to five times the average cost upon roads operated east of the Rocky mountains, and yet the rate of \$1.25 per 100 pounds is considerably less per ton per mile for the character of service described than the current rate charged for carrying the fruit products of Florida and the Southern States to the same markets, over almost dead-level and cheaply operated roads. The rate of \$1.25 per 100 pounds to Chicago was fixed with reference to ventilated fruit cars whose average dead weight was less than 23,000 pounds, and whose minimum carrying capacity was ten tons, since which time the bulk of the fruit has been moved in refrigerator cars whose minimum load is twelve tons and average dead weight 46,564 pounds. This increase of dead weight has been carried for an average increase of 11½ cents per 100 pounds upon the paying load.

Again: At the close of 1893 prominent fruit shippers called upon the officers of this company, representing that there was no valid ground for complaint against the rate of charge, but alleging that the charges for refrigeration were burdensome; that there was no necessity for such extensive use of refrigerator cars, and if a service of five days from Sacramento to Chicago could be given on ventilated cars, their use could be greatly extended, and the use of refrigerator cars reduced with profit to the grower. After corresponding with its connections, the Southern Pacific Company arranged for a schedule of five days from Sacramento to Chicago for ventilated cars in train loads, which was entirely satisfactory to the fruit-growers. This schedule was arranged for without any additional cost, while formerly the cost of expedited service of the character proposed in addition to the regular rate was \$100 per carload. This expedited service for ventilated cars at the standard rate of \$1.25 per 100 pounds would have been accomplished had it not been for the strike, and for that, as I have already said, the railroad company was not responsible.

With reference to this proposed five-day ventilated-car service to Chicago, your committee is pleased to say: "In spite of all your company can do, it may be more successful in the future than it has been in the past in delivering ventilated cars at Chicago within five days."

This statement was objected to at the conference, and it was demonstrated to your committee that, with the exception of 1894, when the strike interfered with and interrupted the prompt and ordinary dispatch of all trains, the five-day schedule was made wherever it was contracted for, and while carriers are not in a position to guarantee this schedule to the extent of becoming responsible for damages in case of failure, yet there is nothing in the experience of the fruit-growers or in their dealings with the carriers which furnishes a valid foundation for questioning their purpose and ability, under



ordinary conditions, to fairly perform any service which they voluntarily undertake.

It was also drawn out, with respect to your statement that the San Joaquin valley could not profitably use ventilated cars at any price, that with prompt movement there was no reason why ventilated cars for certain classes of fruit cannot be used for any and all portions of California.

Perhaps, in view of the foregoing, it is needless for us to state that we do not by any means share the committee's gloomy views with respect to the future of the fruit crop of California. We do not regard the experiences of 1893 and 1894 as a just measure for the prospects of this crop, nor do we think that the fruit-growers and fruit-shippers have directed their attention to the economies and improvements which may be introduced into their methods of marketing their products, which, in view of the very low rates charged by the transportation companies, ought to be exhausted before further concessions from the railroad companies may be justly asked.

Now, coming directly to the statement of the desires of the committee, and the conclusions of the company thereon:

First—It is asked that a five-day ventilated-car service to Chicago be in some manner guaranteed.

The Southern Pacific Company will undertake negotiations with its connections to establish a five-day schedule for ventilated cars, in train loads, and in every way do its best to insure the prompt and regular dispatch of fruit from all points on its line; but there are so many influences beyond human control which interrupt and interfere with train schedules that it is not regarded possible or reasonable to expect that railroad companies should absolutely guarantee these schedules to the extent that would make them liable for damages in case of failure to make the time.

Second—It is asked that the Southern Pacific Company obtain from the refrigerator companies a concession of at least \$50 per car.

The question of refrigeration belongs to the domain of chemistry and not to railroad operating. The railroad companies, in our judgment, are not fitted to and under their organization cannot safely undertake the labor and responsibility of refrigeration. The Southern Pacific Company is in no wise responsible for the refrigerator charges of the refrigerator companies and must decline to assume any responsibility in that direction. This is a matter that the fruit-growers and shippers can handle for themselves directly with the refrigerator companies. We believe, however, with you that the charges for refrigeration have been too high—how much too great we have not the information to determine, but we shall do all that is possible for us to do to bring about a reasonable reduction in these charges, and think that we have already accomplished something in that direction. We would add, however, that growers may accomplish much in this direction by encouraging and favoring the use of cars which have the greatest carrying capacity in proportion to the dead-weight of car and ice, and that a good deal can be accomplished by holding the refrigerator companies to their responsibility as such in the same manner and to the same degree that railroad companies are held responsible by shippers for performing the service which the law or contract makes obligatory upon them.

Third—You ask that a \$1 rate to Chicago be granted on ventilated cars for eight-day service.

The testimony of members of your own committee at the conference confirms the conclusions that had previously been reached that an eight-day service for ventilated cars to Chicago would not be satisfactory, and we are convinced that a proposition to make a differential rate in favor of ventilated cars would not carry with our connections. We believe that the excessive dead weight, as compared with paying load of refrigerator cars, can be reduced, and to this end our energies shall be directed, and in this endeavor we shall be working directly toward a reduction in cost of service, which will redound to the benefit of the shipper.

Fourth—It is asked that carload lots of fruit for Eastern shipment be hauled to points on the main line from branch line points on the basis of through rates instead of local rates.

Our branch line rates are not strictly upon the basis of local tariff, but upon a much lower scale. Branch lines cannot be operated as cheaply as main lines and must be made, as nearly as possible, to pay their own operating expenses. It would be unreasonable to perform the service on branch lines at the same rate per mile as on main lines. Under any such rule of tariff-making branch lines and feeders of main lines would never be built. We believe that the present rates for branch-line service are not unreasonable, but are not unwilling to review them and see if they can be modified in favor of the shipper.

Fifth—You ask that ten tons be made the minimum amount of cherries to be loaded in refrigerator cars.

We know from the statements of shippers that not more than ten tons of cherries can be properly loaded in the standard refrigerator cars, but that, it seems to us, furnishes no reason why the railroad companies should carry a heavy refrigerator car with its load of ice, as above described, and charge less on its contents of cherries than it would charge on its contents of pears, the latter, as a rule, being the cheaper articles. We believe that under ordinary conditions cherries, properly packed and shipped, can better stand the rate of \$1.25 per 100 pounds, with a minimum of twelve tons per car, than can some of the heavier and more hardy fruits. Under the principle of classification in universal use, cherries should be rated higher than pears.

Sixth—You ask that mixed carloads of dried and canned fruits and nuts be accepted by this company, each variety paying its own rate.

This we must deny. Railroads cannot reasonably charge a lower rate for less than carloads of nuts because they happen to be loaded in with dried and canned fruits than if they were loaded in with other merchandise.

In respect to your seventh request, in which you describe the condition of the raisin industry as one of "woful depression," and ask that an emergency rate of 75 cents be given on the raisin crop of 1895, to this we must object. Within the last two years the rates on raisins have been reduced over twenty-nine per cent, the same considerations being urged in favor of that reduction as were urged by your Mr. Fowler in committee. We have reason to believe that the depression in the raisin industry is not caused by or incidental to the transportation charge. As a matter of fact, large growers and shippers of raisins have informed us that the difficulty in obtaining reasonable prices for the raisin product of this State lies wholly with the growers and shippers; that the present depressed condition of that industry is more attributable to the unreasonable competition between our own producers than any competition from abroad. Very truly yours,

J. C. STUBBS.

**POMONA Progress:** Many fruit-growers in this valley will be made happy this year by the returns from their orange groves. After years of labor in growing their trees and several seasons of discouragements because of the demoralized condition of the markets and low prices for oranges, they now see the dawn of good times through better organization in handling their crop and more experience in growing choice fruit. The comparative success of last season's work in marketing the crop and the good results from having a systematic organization for that purpose, reassured confidence in the growers, and the continued success in a much greater degree this season makes them all value highly their orange-grove property. Though the fruit is of fine quality, few groves have heavy crops this season.

## THE FIELD.

### The Great Wheat Problem—No. 4.

California Growers Give Their Experience and Beliefs.

As promised in last week's RURAL, we continue the publication of reports from wheat growers in all parts of California concerning their experience of the cost of producing wheat and their views of the wheat situation generally. For the reports we are indebted to the California State Board of Agriculture.

#### ALAMEDA COUNTY.

**T. C. Johnson, Pleasanton.**—I have used wheat mixed with barley for feeding work horses, also in fattening swine, and find pork made therefrom as good as any corn-fed.

I fear it would not pay growers to feed a large proportion of their wheat to cattle on account of low prices for stock. I cannot imagine what we will do with our wheat, it is so abundant. Probably the growing of some other product for a number of years might relieve us.

Years since I thought fruit raising a welcome change, but that does not pay very well. In a region like this, ten miles north of Pleasanton, grain, fruits and hay are about all we can raise successfully. Formerly, in the valleys, as high as forty-five bushels of wheat per acre was raised. Now if we raise half that amount we do well on land that is pastured alternate years.

Wheat cannot be used economically to feed cattle. As to hogs, tight enclosures are required, etc., and during the spring the grasses are not sufficient to keep hogs growing preparatory to fattening in fall.

I would like some one to suggest a way out of our dilemma, as farming is growing worse and worse. This is a good county, fertile and healthful, but we get only forty per cent of former prices for horses, forty-five per cent for wheat and about sixty-five per cent for cattle. As to hogs, only enough are raised for home consumption. We have fruit of all kinds in abundance.

Wheat costs me, per bushel in the sack, 60½ cents if the yield is twenty-five bushels per acre, the present value of the land being \$35 per acre.

In this locality, where about two-thirds of the tillable land is adobe hills, land should yield 32½ bushels per acre to make wheat growing profitable at one cent per pound.

#### SACRAMENTO.

**J. Reith, Union House.**—Wheat costs me per bushel in the sack, which includes seven per cent interest upon value of land, as follows:

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| 10 bushels per acre, \$ .85 per bu. | 25 bushels per acre, \$ .43 per bu. |
| 15 " " .62 "                        | 30 " " .38 "                        |
| 20 " " .50 "                        |                                     |

The present value of land upon which wheat is produced at above cost is \$30 per acre, and in order to make the growing of wheat profitable in this county at one cent per pound the yield should be twenty-five bushels per acre. From ten to fifteen per cent of the land now yields this amount.

I have had no experience in feeding wheat except to work horses, and am of opinion that it is stronger and better than barley or oats. I think growers would find it profitable to feed a large proportion of their wheat to swine for market purposes. Although not general, yet since the price of wheat has gone so low many farmers in the county have adopted this plan of feeding wheat in preference to barley to work horses. With both at same price per cental, there can be no doubt as to wheat being the more profitable feed. I have been feeding to work horses the past year. Do not mix with other grain, but soak the wheat about twelve hours before feeding. I think it would be better to crush the wheat before feeding, as is the practice with barley.

**Joseph Sims, Union House.**—It costs me to raise 10 bushels of wheat per acre 81 cents per bushel; 15 bushels, 57 cents; 20 bushels, 49 cents; 25 bushels, 42 cents; 30 bushels, 39 cents. These figures include interest at seven per cent upon value of land. The present price of land that will produce wheat at above cost is from \$25 to \$50 per acre. Land should yield from twenty-five to thirty bushels per acre annually to make the growing of wheat profitable in this county at one cent per pound. I know of no land that now produces this amount.

Regarding growers feeding a large proportion of their wheat, and marketing cattle and swine thus fattened, the profit would depend to a great extent upon prices realized.

Let each farmer raise a diversity of crops and do his own thinking. Rules cannot be laid down to govern farmers as a class; each must select his own crops and be governed by his experience or experience of others. At present prices I do not think any one in California can raise grain at a profit upon land costing from \$25 to \$50 per acre.

#### SAN JOAQUIN COUNTY.

**M. T. Noyes, Stockton.**—The California farmer must now compete with the world in the production of cereals and must look closer after the smaller things than has been done in the past. There was a time when, with a virgin soil and wheat at one and one-

half or two cents per pound, the California wheat farmer could make money rapidly. He then bought his meat of the traveling butcher, his vegetables and fruit in the same manner, and some even bought their butter and eggs. But times have changed, and with the million acres of new land now being brought under cultivation every year in different parts of the world, and all the improved machinery for cultivation and cheap transportation, no wonder the wheat market is depressed.

Demagogues tell the farmer that the demonetization of silver and the consequent lack of money has caused the decline in prices. Now I know that, while I have raised considerable wheat in my time, I never sold a pound for silver. I also know that Liverpool is the one place of all the world that takes the surplus wheat and makes the price for the world. Free silver or no free silver, the price of wheat is regulated wholly by its supply as compared to the world's demand.

The most profitable disposition of our wheat, in my opinion, to insure growers warranted returns would be to feed a greater portion to work animals, fatten cattle and swine, rear poultry and thus avoid such immense importations as we now have for our own consumption. I have had some experience in the use of wheat as feed for animals with very favorable results. I would recommend mixing with lighter feed for horses or cattle.

A large proportion of the land in this county now yields twenty-five bushels wheat per acre, which makes wheat growing fairly profitable at one cent per pound. Wheat costs me per bushel in the sack, including interest, etc., 97½ cents if the yield is 10 bushels per acre; 67 cents if 15 bushels; 53 cents if 20 bushels; 42 cents if 25 bushels; and 35 cents if 30 bushels per acre. The present value of land upon which wheat is raised at above cost is \$60 per acre.

**J. D. Huffman, Lodi.**—Wheat costs me 93 cents per bushel if the yield is 10 bushels per acre; 62 cents if 15 bushels; 46½ cents if 20 bushels; 37 cents if 25 bushels; and 30 cents if 30 bushels. Seventy dollars per acre is the present price of land upon which wheat is produced at above cost, and in order to make wheat growing fairly profitable in this county at one cent per pound thirty bushels per acre should be the yield, but not over twenty-five per cent of the land now produces that amount.

I have had some experience in the use of chopped wheat fed to hogs to fatten for market, and see no reason why it should not be fed when barley is at the present price.

In order to insure the wheat-grower warranted returns cheaper transportation to European markets must be had. If a large proportion is fed to swine, the present price of pork will not keep up. I believe a fertilizer that could be laid down near where needed, at about \$8 per ton, would increase the yield. Also, a shorter line of transit to get wheat to Liverpool market would be beneficial.

A bonus to the producer of a certain amount per bushel, or cwt. up to a stated amount produced, say four or five thousand bushels, would protect the small growers. Then, instead of the farmers having to bear the burden of taxation, a large proportion would be placed elsewhere. If these suggestions are not heeded very soon there will be but a few producers and a multitude of monopolists of all kinds.

**E. G. Williamson, Stockton.**—Wheat land is worth \$30 per acre, and, counting everything, it costs me about 61 cents per bushel to raise 10 bushels per acre; 15 bushels, 45 cents; 20 bushels, 34 cents; 25 bushels, 30 cents, and 30 bushels, 21 cents.

To make wheat-growing profitable, land should yield fifteen bushels per acre at one cent per pound, and in this county probably one-third yields this amount.

There is no reason why wheat should not be used as feed for animals. I think at present prices it would be profitable to feed a large proportion of our wheat to swine for market purposes; for cattle I cannot say.

The wheat business, under present conditions, must be conducted in connection with stock business in order to be profitable.

**Arthur Thornton, New Hope.**—With a yield of thirty bushels to the acre, wheat costs me per bushel in the sack 38 cents, which includes interest, etc. Eighty dollars per acre is the price of land upon which wheat is produced at above cost, and in order to make the growing of wheat profitable in this county at one cent per pound, land should yield forty bushels per acre.

In the use of wheat as feed for swine, I mix say one-third wheat and two-thirds barley, crushed. This I find more profitable than feeding barley alone. At present there is no way to reduce the surplus other than to feed to cattle and swine.

#### STANISLAUS COUNTY.

**O. M. Henry, Modesto.**—Wheat costs me per bushel in the sack, including seven per cent interest upon value of land, 33½ cents if the yield is 10 bushels per acre; 22½ cents if 15 bushels; 17 cents if 20 bushels; 14 cents if 25 bushels; and 12 cents if 30 bushels. Thirty dollars per acre is the present price of land upon which wheat is produced at above cost.

Land in this county should yield twelve bushels per acre to make wheat growing profitable at one



cent per pound. About one-fifth of the wheat land now yields this amount.

I have had no experience in the use of wheat as feed, but am going to do so, feeding twenty-five per cent of what I raise.

Seven ranches out of ten are mortgaged from raising wheat. Divide crops, practice economy, and money will come at all times and the mortgages will disappear.

*L. A. Richards, Grayson.*—The figures given below are based upon twenty years' experience in this locality, but there is probably not to exceed twenty per cent of the wheat-growing portion of this State that can produce wheat at these figures, which includes interest upon value of land at seven per cent, wear and tear of equipment, etc.

|                                    |                                     |
|------------------------------------|-------------------------------------|
| 10 bushels per acre, \$ 56 per bu. | 25 bushels per acre, \$ 344 per bu. |
| 15     "     "     44     "        | 30     "     "     324     "        |
| 20     "     "     38     "        |                                     |

With land costing \$30 per acre, and a yield of fifteen bushels, wheat can be grown profitably in this county at one cent per pound. Twenty per cent of the land now yields this amount. Wheat undoubtedly is a good feed, but I am not certain that it could be fed at a profit.

*C. N. Whitmore, Ceres.*—With a yield of ten bushels per acre, wheat costs me 56 cents per bushel, which includes interest at seven per cent, etc. I have had no experience feeding wheat to stock. What the farmers most need at present is water for irrigation purposes, which would permit the raising of a diversity of crops.

I made calculation that one acre will produce ten bushels, which is about the average in this county.

|                                                          |        |
|----------------------------------------------------------|--------|
| The cost of plowing, seeding and harvesting one acre is  | \$3 38 |
| Seven per cent interest on land, valued at \$30 per acre | 2 10   |

|                                            |        |
|--------------------------------------------|--------|
| Total                                      | \$5 48 |
| Ten bushels wheat at 75 cents per 100 lbs. | \$4 10 |

|      |        |
|------|--------|
| Loss | \$1 38 |
|------|--------|

Land should yield at least fifteen bushels per acre to make the growing of wheat profitable in this county at one cent per pound.

(To be continued.)

### Wheat Birds in the San Joaquin.

TO THE EDITOR:—There is a little grayish bird which is known here as the wheat bird. They are sometimes in flocks of thousands and take up all wheat that is not well covered after sowing. Then when the wheat is coming out of the ground, they run their bills down to the kernel and take it. Usually they get the kernel, but leave the sprout, which grows all right; but this year sprout and kernel were both pulled up.

On sandy, loam soil there is frequently from three-fourths to nine-tenths of the crop taken before it can get two inches high.

The meadow larks are doing the same trick on a large scale, too, as they are becoming quite numerous here. They make a much larger hole with their bills than the wheat birds, and I think they get the sprout every time. About ten or twelve years ago we had a somewhat similar time with the wheat birds; and by sowing wheat soaked in a solution of strychnine, many were poisoned. Can you give me any information as to a remedy for this pest?

The birds seem to do most damage to late-sown grain on light soil.

I have poisoned many hundreds of them. I use one-fourth of an ounce of strychnine, well powdered, two pounds of sugar and one gallon water. Heat the water to dissolve the sugar thoroughly. Dip clean wheat into the liquor and drain it. I use a large milk skimmer to handle wheat. The recipe given will do for sixty pounds of wheat. Yours truly,  
Goshen, Tulare Co. M. S. FEATHERSTONE.

Can any one tell better ways of escaping the injury by these birds than by the use of poison?

### THE DAIRY.

#### Alfalfa Growing in San Bernardino County.

*Edward Daley, Sr., San Bernardino.*—I have had forty years' experience in raising alfalfa—for the first fifteen years, merely enough to experiment with; since then, from ten to fifteen acres. The land is sand and loam, whether bottom or upland, and subsoil very much the same as the surface. Strata of sand and loam are from two to six feet downward before the character of the soil changes. This is mostly bottom land, adjacent to streams; and, although the surface is dry, water will be found at from five to twelve feet. After encountering the moist soil, sometimes stiff clay is found, and sometimes hardpan. Although the hardpan appears moist, it is compact. Usually, immediately beneath this hardpan, surface or well water is found. In preparing land for alfalfa, plow, pulverize and level to an even surface, whether preparing for rain or irrigation. Use twenty to twenty-five pounds of seed per acre. Sow broadcast, same as other grain; harrow lightly, sufficient to cover all the seed. In

this locality we sow from December 31st to February 1st. The first year mow the weeds and haul them off. Do not usually cut for either hay or seed the first year. Alfalfa does not winter-kill here. We irrigate the alfalfa fields at least once, as soon as the hay is removed, when the ground is dry, with water from artesian wells, and also pumping from common wells. The crops appear to require about as much water after the alfalfa has been growing several years as during the first year. We get from five to seven cuttings each year, which average one ton per acre.

For hay, we cut after it begins to bloom, but before the full bloom; for seed, it should be cut when the pods turn black. The June crop is generally used for seed here, and is cut with a combination mower and reaper. The hay is allowed to cure twenty-four hours before raking into windrows, where it cures twelve hours longer, then is stacked about the same as red clover, care being taken to have it sufficiently dry not to mold in the stack or mow. Good alfalfa land here is worth \$100 per acre, with twenty-five per cent added to irrigate. It costs about \$3.50 per acre to put into the stack, including water rent. Balers charge \$1.75 per ton. The favorite size of bale is 140 pounds. The average yield of seed is about six bushels per acre. Expense of thrashing and cleaning, one-sixth of the seed. We use the common thrasher. Baled hay sells at \$10 per ton. Seed sold fifteen years ago at 18 to 20 cents per pound and for the past ten years at 10 cents. Ton for ton, alfalfa hay is superior to either clover or timothy; as a pasture, it is about the same.

Swine will thrive well on green, thrifty alfalfa, but will not fatten. Horses do well, but sheep injure the plant. For cattle it has about the same value as clover. Hungry cattle turned on wet alfalfa fill themselves quickly, and will bloat. A piece of rubber hose pushed down the gullet, with the animal's mouth kept open, will generally give immediate relief, with least damage to the animal. Irrigation does not appear to enhance the quality of the crop. The straw from the seed crop is worth about half as much as the regular hay crop. When sown on hard, compact soil, alfalfa seems to be crowded into bunches. It attains its best yields about the second year, and, if pastured, should be renewed every six or eight years. Two or three plowings, well harrowed, will rid the ground of the crop. My experience has been confined to California soil and climate, where it is more valuable than any other hay for dairy purposes, for beef and for work horses, and is universally used where it can be obtained at reasonable prices. Farm horses, where they have sufficient time for eating, will work and keep fat the year around on alfalfa without grain. It is not unusual for it to yield two tons per acre for each cutting through the season. I have sold the seed from sixteen acres for \$800, each crop, for five years. This year the hay for \$10 per ton, delivered from the field, on six acres, brought me \$360. A coat of barnyard manure, applied after the first cutting, will help it to stand the winter better than if left bare. My theory is that manure is of the greatest importance in the production and protection of alfalfa.

*John A. Cole, San Bernardino.*—I have raised alfalfa twenty-five years on from 5 to 300 acres and all kinds of soil. Clay, with plenty of irrigation, is the best. Water is found here thirty-five to sixty feet from the surface. Alternate strata of dry soil are found for the first twenty feet; then it continues moist until water is reached. In preparing the ground, plow very deep, and have it absolutely free from brush or weeds. Unless the ground is already moist enough, irrigate before plowing, harrow thoroughly with a revolving harrow until there are no clods; sow about fifteen pounds of seed per acre, and brush it in with a light brush drag. It should not be covered deep. Here we sow early—January 20th or by February 1st—also sometimes about the last of November. The first cutting is not very clean; but after that, if the stand is good, the alfalfa will kill out all other grasses or weeds except, perhaps, such as "crow's foot" or "devil's grass". It is advisable to cut it for hay only the first two years. By cutting every five weeks the roots become stronger, not having much top to support. It does not winter-kill. I have known one field to yield well for twenty-five years. I irrigate every time I cut it, on clay soil, which is best. On sandy, damp loam, I irrigate only every other time it is cut. It can be cut on dry and irrigated land every four or five weeks, from March until December, each year. The ground is completely flooded each irrigation.

It requires about 250 (miner's) inches of water for an irrigating stream. One man can irrigate five acres per day with that. Where the land is level, and there is plenty of water—say 500 inches—one man can flood ten acres per day. Our irrigation water is obtained from streams; wells would be too expensive. Alfalfa needs more water the first year. Old alfalfa roots sometimes extend down to water, even twenty-five feet below the surface. After the first year I have obtained seven cuttings. A good stand with plenty of water will yield two and one-half tons per acre each cutting. As soon as I notice the first bloom I cut for hay, and for seed when it is ripe. It injures alfalfa fields to allow them to go to seed; they will run out if used for seed only.

I cut the third crop for seed. Thrash it as soon as possible after cutting. In hot summer weather I let it lie about four hours; but, if cool, twenty-four hours, and then haul to the stack. I advise putting it in barn; and, if well cured, it will never heat. The total cost of alfalfa hay in the stack is \$1.50 per ton; value of land with irrigation, \$100 per acre. Baling costs \$1.75 per ton—150 pounds to the bale. The ordinary thrashing machine is fairly satisfactory if rightly managed. The average price for hay is \$10 per ton baled, or \$8 loose. Seed brings from 7 to 11 cents per pound.

Alfalfa hay is the best food for cattle of any grown here. I feed 200 thoroughbred Jerseys on it; no other hay nor grain is used. They average one and one-half pounds of butter each per day during the summer season. I get 30 cents per pound all the year. For swine pasture alfalfa has no equal. I keep 100 hogs on five acres and the skim milk from my dairy. They will keep in good growing order on alfalfa pasture alone, but require some corn for hardening the meat before killing. It is satisfactory pasture for horses and sheep, and has no equal for cattle. Horses and hogs can be turned on alfalfa at any time with safety, but it is very dangerous to turn cattle on young alfalfa. When they become bloated badly, so their breath is short, are seemingly in great pain, and have a disposition to lie down, puncture them with a five-inch trocar, on the left side, five inches in front of the hip bone and the same distance down from the spine, and there is no danger of loss.

The best alfalfa is grown on land that needs irrigation, for the reason that it grows much finer. Damp lands will not yield one-half as much as the best irrigated lands. Also, alfalfa grown on damp land will become mixed with weeds and run out in a few years, whereas that grown on clay will live many years without reseeding. Alfalfa cut for seed is not so valuable, but is a good rough feed. In extremely wet land, alfalfa will sometimes die out in one or two years, while on dry soil mixed a little with loam it will live to a great age. In Sonora, Mex., there is a plat known to be over sixty years old, and it is perfectly healthy now. Alfalfa will attain its best yields the third year. If the gophers are kept out, the soil is suitable, and it is kept well irrigated, it will grow longer than I have a record of. To rid land of it, plow twice in the hot season, and the work is accomplished. Alfalfa will not grow on dry land without irrigation, and it is not a success on wet land. In other words, to attain the best results, it must be irrigated. All the statements I have made apply to San Bernardino county, California. I have about 300 acres in alfalfa at the present time, 2000 feet above the sea. I do not think alfalfa would be a success in extremely cold countries. On dry lands, the gophers get to be very numerous unless the land is frequently irrigated. The largest yield I have ever known was about six tons per acre of "lucern," or "stiek alfalfa," as some call it. It is similar to the finer sort, but grows much taller and coarser, and the quality of its hay is poor.

### FRUIT MARKETING.

#### Comments Upon Eastern Selling Methods.

TO THE EDITOR:—The following extract from a letter from my son, E. Thomas Adams, in Elmira, New York, seems to be of public interest, as it sets forth very clearly the competition which one variety of our fruits meets in Eastern markets, and makes a practical suggestion for the betterment of our local markets by adding wire handles, which will cost but a trifle, to the baskets which we now use with crates. Incidentally it shows the use of the copper cent in increasing consumption. It appears that eighteen pounds net of fruit, put up in six baskets costing two cents each, *retail* in Eastern local markets at from 60 to 78 cents; retailer's profit cannot be less than 25 per cent on perishable articles like fruit. Deducting this, the grower should receive 45 to 61 cents for 18 pounds of fruit, the packages costing 12 cents (he does not state whether the baskets are crated), less commission and freight. Deducting cost of baskets, this yields the grower for his fruit packed 1½ to 2½ cents per pound. We are reasonably content to get 50 cents, less freight and commission, for 20 pounds in crates (baskets costing 10 cents), or two cents a pound less freight and commission, but the greater part of our fruit sold in the local markets sells for very much less packed in boxes costing four cents, and, as my son says, looking mussy, nasty and uninviting on the stands. It is worth while to consider whether we cannot enormously increase our home market—which is always the best market—by paying more attention to the attractiveness of our packages and agitating for the copper cent.

EDWARD F. ADAMS.

EXTRACT FROM LETTER OF E. THOMAS ADAMS.

Northeast of Elmira is the lake district, comprising the greatest grape-growing section in the State. The fruit from this section goes largely to Philadelphia, and, of course, the local market.

Nearly all this fruit is shipped in small baskets—



five and ten-pound baskets (so-called). The five-pound basket is:

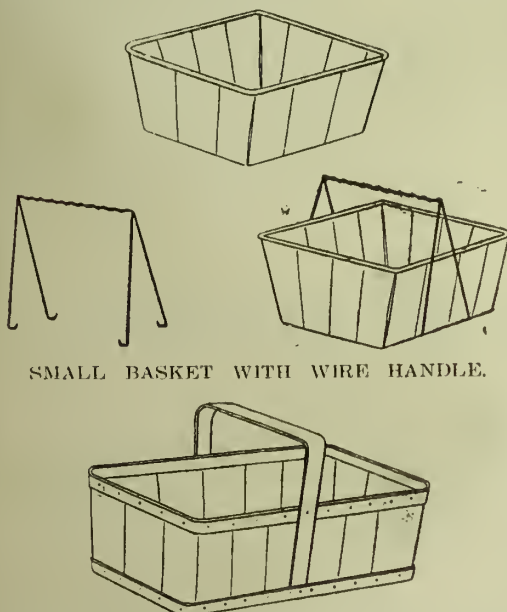
|                   |                       |
|-------------------|-----------------------|
| Top.....          | 5x11 inches.          |
| Bottom.....       | 4 $\frac{1}{2}$ x10 " |
| Depth inside..... | 3 $\frac{3}{4}$ "     |

It contains about 180 cubic inches, equal to one-sixth of a 5x12x20-inch box. The bottom is three-eighth-inch pine; sides, one-sixteenth-inch elm; top, one-fourth-inch pine. There is a wooden band bent around the top, both inside and outside, a band on the outside at the bottom, and it has a good wooden or wire handle. The corners of the basket are rounded. This basket costs close to two cents (I could not get exact figures), and contains three pounds of fruit (actual); total weight, 4 to 4 $\frac{1}{2}$  pounds.

The ten-pound basket is made the same way, but of the following sizes:

|                   |                            |
|-------------------|----------------------------|
| Top.....          | 15x6 $\frac{1}{4}$ inches. |
| Bottom.....       | 13 $\frac{1}{4}$ x5 "      |
| Depth inside..... | 4 $\frac{3}{4}$ "          |

It contains about 360 cubic inches, or one-third of a California box. The small box sells here in Elmira for an average of twelve cents a box. I paid as low as ten cents and as high as fifteen cents; at fifteen cents I quit, being poor. The large box sells at double this price. The use of the odd cent helps sales and prices. When the price is ten cents you will see every one with a box. When the price is fifteen cents the prudent buyer lays in a much smaller stock. Eleven and twelve cents go about as well as ten; at thirteen the purchaser stops to think, and at fourteen and fifteen there is a big falling off. The ten-cent package is the good selling package, and California fruit must sell for five cents a pound to be bought by the masses here.



SMALL BASKET WITH WIRE HANDLE.

STYLE OF FIVE AND TEN-POUND FRUIT BASKETS.

There are many varieties of grapes grown here, but the Concord is the best and the cheapest. Lower prices are for Concord and Isabella. Delaware and Niagara are always one to two cents higher in price.

As compared with the California fruit-stand, with its paper bag and dirty fingers, this plan of selling the original package as packed at the farm is far superior, and would, I think, largely increase sales in San Francisco.

The grapes here are good to eat. A Tokay or a Muscat picked when green cannot compete after the novelty is gone. It must be a ripe-tasting fruit that you send to Philadelphia if you compete successfully.

I think a cheap rig for the local California market could be made as shown—two wires twisted together to form a handle and a paper over the top, the basket being the one you put into the regular crates.

Now, would not many people buy a clean package such as is shown and take it home as they returned from business or from work who would not think of the paper bag with its mussed contents?

## FLORIST AND GARDENER.

### Bamboos in California.

We are indebted to Dr. F. Franceschi, of Santa Barbara, for very interesting and important notes upon exotic plants which thrive in that favored part of the State and will be found perfectly satisfactory in other mild regions as well. The bamboos are one of the most confusing classes of plants to the amateur who has not facilities for comparative study of the different species. Dr. Franceschi's notes on the bamboos will therefore be valued highly by many readers of the RURAL.

It is not generally known that bamboos will flower and ripen seeds very seldom, that is once in their life, after fifty and more years, perhaps; this supreme effort appearing to exhaust the vitality of the individual, just as the commonly called Century plant (*Agave Americana*) offers an example familiar to all. Not that the flowering of bamboos have any

likeness with the above, their flowers being minute and produced in more or less furnished spikelets, generally from the axils of the stems or culms: their seeds resemble those of other grasses more familiar to us, like wheat, barley or oats; they attain larger sizes at times (about two hundred are the known species of bamboos) and in some instances are encased in a fleshy pulp—these are called *Melocanna*, that, is apple reed, but have not yet been introduced to cultivation from their native habitat, which is southern India and the Malayan archipelago. The scarcity of seeds and the prohibitory weight of strong clumps, which, moreover, are very liable to dry off and die on a long journey, give sufficient explanation why bamboos are not so plentiful in southern California as might reasonably be expected. Still, Santa Barbara takes the lead with them also, the larger number of kinds as well as of species being undoubtedly to be seen here.

**Himalayan Bamboos.**—The most prized and most popular, there being hardly any decent gardens deprived of it, is *Bambusa gracilis*, from the Himalaya, originally introduced by Mrs. Sarah E. Cooper at Ellwood, now grown up to be a truly magnificent specimen, from which probably most of the other plants grown here are derived. Another beautiful specimen is to be seen at Mrs. John Spence's nursery, not much out of the city limits. Next to this in general appearance, but rather reduced in size of stems and leaves, and not too widely distributed, is *Thamnocalamus Falconeri* (*Arundinaria falcata* of gardens), from the same region as the above, but at a higher altitude, as is shown by this last being hardy in many parts of England. These two kinds, and a third one which I would refer doubtfully to, *Bambusa verticillata* (from the Himalayas too), with erect, not arched, deep yellow stems, and leaves disposed in whorls, partially striped with white, do not send up runners or suckers, and can be propagated only by division of the clumps, which has certainly prevented their more rapid spreading in gardens.

**Japanese Bamboos.**—Among the so-called Japanese species (which are really originating from northern China), the most commonly seen is *Bambusa* (or more correctly *Phyllostachys*) *viridi glaucescens*, attaining thirty feet and over, with culms about one inch thick. The finest growth of this is undoubtedly in the grounds of Mr. E. H. Sawyer at Montecito. *Phyllostachys nigra* (the black bamboo) is rather common; not so much *Phyllostachys aurea* (the golden bamboo), these two never attaining very large size. The six mentioned species, together with *Bambusa metake* (correctly *Arundinaria japonica*), which has larger leaves and thinner and shorter stems than any of the preceding, are fairly common and appear to have been introduced in Santa Barbara within the last twenty-five years. Quite recently a much larger number of other species or varieties have found their way in our gardens, mostly through the Japanese importing houses of San Francisco and Oakland. They generally bear only Japanese names, and it will be very hard to have them properly identified before they are more fully developed. Among them are some not to be seen yet in European gardens, while others rather well known there are missing here.

**Giant Bamboos.**—Special mention must be made here of the so-called giant bamboo of Japan, which has been introduced here of late years at rather high prices, as it will be worth while saying something more about it in order to prevent misconceptions. Giant bamboo is a vague name applied, not to a determined species, but to many of the taller bamboos growing in different countries. The largest bamboo living in Japan is *Phyllostachys mitis*, originally from China, where it was found by Fortune to grow sixty feet high. In Europe, where it has been well known these last twenty-five years, it makes thicker stems but not taller than *Ph. viridi glaucescens*, and presents the habit of a much enlarged form of *Ph. aurea*. Whether the plants lately introduced here belong or not to this species, it will be hard to tell for some time, they generally having one big stem cut down to a few inches above ground, and making only short and thin shoots for the present.

One of the largest growing bamboos (which is also called giant) is *Bambusa vulgaris* from India, introduced now to all warm countries. To this species I believe to belong two good clumps growing vigorously in the grounds of Mr. K. Stevens, and a smaller one in those of Mr. F. W. Gillespie, both of Montecito, none of them having attained their ultimate size. Not less tall and thick as the preceding (that is, seventy feet high and two to three and more inches thick) is *Bambusa arundinacea*, similarly from India, to my knowledge not introduced to the United States until the Southern California Acclimatizing Association of Montecito raised a large stock, which will afford to distribute rapidly such a beautiful and useful plant all over the country, not only for ornament, but for industrial purposes.

Efforts made in this direction ought to secure in a short time the spreading, also, of the gold-stemmed form of *Bambusa vulgaris*, which is quite hardy at Palermo, Sicily; of the Catamarang bamboo from Formosa, growing together with the camphor trees and acknowledged to produce the largest stem known, and of many other kinds likely to thrive well here. The rich, deep alluvial soil of our valleys will

be particularly suitable to them, but it would be a mistake to believe that bamboos will grow only in moist grounds, many of them being exposed, in fact, to most severe droughts in their native countries.

## HORTICULTURE.

### Successful Fruits at the Pomona Station.

A branch station of the agricultural department of the University of California is situated near Pomona, on the east border of Los Angeles county. J. W. Mills is foreman and he is making a close study of the comparative local values of the large collection of fruit varieties planted and now fruiting at the station. Mr. Mills writes for the *Chino Champion* a short letter which is of importance to other southern localities as well as the immediate vicinity of the station. He shows that the Du Roi and Hirtu du Japon figs, which are a great success at Tulare, are in the Chino valley a flat failure, souring and rotting on the tree. At that station, Angelique, Monaca Bianca and White Dattato are the best. They did not sour this year till after the rains commenced. What they will do other years remains to be seen. Dattato White appeared to be the best all-around fig, having a moderately smooth, tender skin and little rag; flesh good color and very sweet; size medium; ripens about October 5th.

Monaca Bianca has a thin, rough skin, light green when ripe; flesh bright red and very sweet; size above medium; ripens September 30th.

Angelique is a beautiful, glossy fig when ripe; flesh pale yellowish brown and very sweet; size small; ripens September 22nd.

The best of the earliest peaches for the last season was Amsden's June, ripe June 20th. Next comes Gov. Garland, a little better in quality; ripe June 24th. Next, Early Alfred and Hale's Early, ripe July 29th. Large Early York is the best of this class, and ripens August 5th.

Of yellow freestones, Crawford's Early comes in on July 29th. Foster follows on August 1st, and is a much finer and better peach in every respect. It is the best shipping freestone in the north, and seems to carry all its good qualities with it in this section. Susquehanna does well, and ripens August 18th.

Of yellow clings, Runyon's Orange, Sellar's and California are fine; ripen about August 25th. McKevitt's cling was the best, and gave a larger average than any yellow cling. It ripens August 30th. Heath's cling is the best white cling, ripening September 10th.

For late table use, Smock's Late Free, ripe September 21st, and Comet (freestone), ripe October 1st, are good.

None of the varieties of fruit named received a drop of water except by rainfall.

The best table grapes proved to be Black Muscat, ripe August 28th; Cipro Nero, ripe September 20th and lasting till Christmas; Frivoti, same period of ripening; Pedro Jimenes, ripe August 20th; and Pizutello di Roma, ripe September 9th.

The latter is a crescent-shaped grape, medium size, white and crisp. Pedro Jimenes is very fine; large bunches; berries medium size and whitish yellow. It is the famous sherry-wine grape. The two first-named grapes are valuable for their late ever-bearing qualities. These grapes all grew on very sandy, dry land, and received no irrigation whatever.

### Another View on Root Knot.

TO THE EDITOR:—I thought I would drop you a line on the root knot, although much has been said and written about it. Now, from experience I have had, I have come to the conclusion that the knot begins after the seedlings just begin to grow or soon after the seed has nicely germinated. I have observed that a good many seeds throw up an enlarged growth and the roots are much larger than the usual size. This is caused by too rapid growth of the seed or plant. Then comes cold weather that checks the flow of sap in the top of the young seedling, while the roots are growing fast in the warm soil. This pushes the sap out near where the root and top join, or at the point where germination began.

Last spring I marked several plants in my almond seedlings in a block of 3 $\frac{1}{2}$  to 4 acres. I marked those which looked as I have described. They all were found afterwards to have the knot on them. I marked many seedlings in the same block that were looking healthy and as young seedlings should look. I could not find a knot on one of them.

After a few warm days the seedlings all begin to grow again and soon the ones with the enlarged growth look as healthy as any. In a block of 1 X L almonds one year old from the bud, 20,000 trees to the acre, the inspectors did not find more than one tree in a thousand, or three trees in five thousand, with the knot. This block was planted two years ago when the ground was very wet. The block of yearlings was planted when the ground was moist, but not wet. The difference was in the season's rainfall. What I have said of the almond applies to the peach.

J. T. BOGUE.

Tudor, Sutter Co.



## THE HOME CIRCLE.

### When We Worked Our Tax Out.

Oh, our life was tough and tearful, and its toil was often fearful,  
And often we grew faint beneath the load,  
But there came a glad vacation and a sweet alleviation.

When we used to work our tax out on the road.

When we used to work our tax out then we felt the joys of leisure,  
And we felt no more the prick of labor's goad:

Then we shared the golden treasure of sweet rest in fullest measure.

When we used to work our tax out on the road.

There are sapient seers and sages who predict, in coming ages,

Life's tragedy of labor will be o'er,  
And a glad full-fledged millennium will leap on the proscenium.

And we'll play, but never labor any more.  
But we look not in the future for that happy, halcyon hour.

When we'll throw off every burden, every load;

For our Eden hurst in flower, and we doted in leisure's bower.

When we used to work our tax out on the road.

When we used to work our tax out (if I let the bottom facts out),

We had somnolent contentment and repose.  
With no toil or work to cumber us our rest was sweet and slumberous

And in deep, delicious dreaming did we doze.

The drowsiness of languid rest o'er every man was creeping.

And in a calm, serene content we all threw down our load;

Careless of life's wail and weeping, every blessed man was sleeping.

When we used to work our tax out on the road.

—Sam Walter Foss.

### A Pink Silk Parasol.

"What are we going to do now?" queried Anne. "If pa had only stayed quietly at home," sighed Margaret.

"But he didn't," said Helen. "And the lecture tour ended in disaster; and he has returned with empty pockets, and a cold which threatens pneumonia!"

"Oh, dear! and we were so well off before little mother married again," Margaret murmured, dolefully.

"Treason!" cried Helen, stoutly; "not one word against Pa Pendergast—the dearest old visionary thing that ever lived!"

"He certainly tries to make a fortune for us," smiled Anne.

"And has only succeeded in reducing us to the verge of—beggary!" supplemented Margaret.

"The expressman is stopping at the gate," said Helen; "but of course it's a mistake—"

"Yes; nothing comes to us now—but trouble," ended Margaret.

But a moment later and Helen called back, ecstatically,—

"Oh, girls, it is for us, sure as you live!" Then, less joyfully,—

"But—there's seventy cents to pay!"

At last the necessary amount was made up, the expressman departed, and the girls and their mother, in a state of unusual excitement, gathered around the huge, irregular bundle which by their united efforts, they had dragged into the middle of the sitting-room.

"Who could have sent it?" wondered Anne.

"What do you suppose it is?" questioned Helen.

"It's—old clothes," Margaret said, gloomily.

"Madge!" in a general chorus of dismay.

But even has Helen cut the strings the lop-sided bundle burst asunder and shed its contents of crumpled ball gowns and all kinds of forlorn and dragged finery upon the floor.

Anne bit her lip, Margaret's eyes flamed wrathfully, and Helen laughed. But the mother's face worked piteously, and it was all she could do to keep back the tears.

All her life till now Mrs. Pendergast had been used to comfort, and even luxury; and she had always shown much tact and delicacy in sending their own left-off but useful garments to those who were poorer than themselves. And it was a bitter humiliation to her now, when, for the first time, a mass of

dingy and inappropriate finery had been literally dumped upon her doorstep, without any accompanying message from the rich cousin, from whom it undoubtedly had been sent.

"There isn't a practical thing among them!" laughed Helen, who was adorning herself with whatever came first to hand. And even Margaret could not help smiling at the comical picture her pretty young sister made with a crushed French bonnet perched coquettishly on her fair curls, a faded and altogether too ample olive redingote enveloping her pretty form, and above her head the bony skeleton of a once splendid parasol—its melancholy ribs uplifted now, as if imploring pity.

Anne laughed hysterically; but just then pa's querulous voice was heard in the room above, and the mother was glad of an excuse to hasten away.

Night came. The debris had disappeared, and the letter of thanks to Cousin Frances, which Helen had volunteered to write was finished.

"Listen, girls, while I read it," she said; "but don't interrupt. If you think of anything more to say just wait and I'll add it on at the end."

"My generous and rich relative," she began, and regardless of the rising murmur of dismay, she went on, "it was so thoughtful of you to send us such a lot of old clothes (which we can't possibly make use of), and not to prepay the express (which is uncommonly high in this part of the world.) We now understand why it is 'more blessed to give than to receive.' But, unfortunately, we don't know anyone who would take such stuff as a gift unless it's the ragman—"

"Helen!"

"You shan't send such a letter!" and Margaret snatched the perfectly proper little note she had written from Helen's hand, while the young girl laughed merrily over the success of her impromptu nonsense. She loved to tease her sober elder sisters, and with her happy disposition she found a way of getting fun out of everything.

But anxious and busy days came after this. Pa Pendergast was seriously ill for a time, and before he was really able to be around again he was planning another of those disastrous lecture tours, with which he was always trying to retrieve their fallen fortunes. At last, however, they had managed to persuade him to put it off until the fall.

There was no family in all the village who had once stood so high, or were more respected in these days of their misfortunes. "Pa's" failings and good qualities were alike freely discussed and his wife commiserated for having allowed her visionary spouse the control of her comfortable little fortune, which, under his childlike incapacity for business, had disappeared in an incredibly short number of years.

Anne and Margaret were now the main support of the family, one teaching music and the other having a good position in the village school.

The "little mother" and Helen were the "household angels," and it was no light task to keep things nice and comfortable with their extremely limited purse, and to prevent pa from seeing too plainly the ruin he had wrought.

The neighbors were very kind, and often some little delicacy found its way to their scanty table—given with so much friendly good-will that sensitive little Mrs. Pendergast was no more hurt by the attention than the neighbors were when Helen brought them bunches of mayflowers from the woods in spring.

But of late Helen's fingers had been busier than ever. Upon careful re-examination the "bundle" had showed possibilities which had not been apparent at the first. And the old party dresses dyed—for Helen had mastered the dye pot's mysteries long ago—were now transformed into four silk petticoats, which would "rustle delightfully" under their woolen gowns.

"Just the last things in the world any of us really wanted," Helen admitted; "but the silk wasn't fit for another thing, and as it didn't cost us anything I guess we can afford to be swell for once."

Then in some magical way her deft fingers had fashioned for herself as

dainty a gown from the voluminous old gray opera cloak and the best of the well-worn redingote as ever a pretty maiden wore to church on a bright Sunday in spring.

The battered Paris bonnet bloomed anew with apple-blossoms, freshened over the kettle's reviving steam. But the crowning feature of the costume was a beautiful pink silk parasol, which Cousin Frances would certainly never have recognized as the "skeleton" of her famous bundle, newly clad in the pink lining of the opera cloak, and adorned with the freshest flounces of the chiffon gown.

"Girls, how do I look?" was Helen's anxious question, as, arrayed for the first time in all her glory, she was about to start with them to church.

"Just too sweet and lovely!" Margaret said with enthusiasm; and the mother, who thought her girls were always perfect, echoed Margaret's words.

But Anne was troubled. Such finery seemed hardly in accord with their straitened circumstances, or with the almost Quakerish simplicity of the quiet town; but Helen was so happy that she could not bring herself to speak her doubts, which, after all, might prove without foundation.

She was keenly alive, however, to the sensation which Helen's appearance caused, and which, all during the service, divided the attention of the congregation with the good minister's words. And after the service Anne's straining ears caught more than one fragment of unfriendly criticism, which seemed floating in the air.

"It does beat all," old Mrs. Sharp

whispered to her neighbor, "how folks behindhand in their rent can buy such finery!"

"Praps Pa Pendergast has somehow made his everlastin' fortune," was the audible answer.

"Did you see how Chan Bassett kept lookin' at her? He can't afford to dress a wife like that. I heard Mis' Bassett tell him so during the collection."

"Jest see that pink parasol! Why, Mandy couldn't get one, plain dark blue, for less'n five dollars! An' silk petticoats, too, I know by the rustlin'. They're up and down extravagant, or else they ain't so poor as they've been makin' out."

"An' the neighbors sendin' 'em in pies an' cake at every bakin'!"

Helen's cheeks were like roses as they went on their homeward way, and Anne wondered if she, too, had overheard the gossips' whispering, or whether the deeper flush was only the reflection from the pink silk parasol, which she held so bravely overhead. Margaret was less observing and was evidently quite unconscious of any unusual stir on around them.

It was the first Sunday in many months that Chauncey Bassett had not walked with Helen. He had been with his mother on the church steps when they came out, but he had only bowed and had looked away. It was certainly strange, thought Helen, but, if he didn't want to come, he needn't. And no one, not even Anne, should know she cared.

The weeks rolled around, and summer followed spring. Every Sunday Helen went to church in her brave attire, and walked home afterward

## Planting the Standard



All hail Columbus! Behold the great navigator as he lands. The perils of the deep are past. The clouds of fear have vanished. The night of gloom has ended. In the heavens the sun of success shines resplendent. Morning has dawned.

Imperiously the banner of haughty Spain greets the daylight. Upon its fluttering folds are inscribed the destinies of a new world. Its gleaming surface marks a long advance in the evolution of the human race. It tells a story of prophecy unparalleled, of development unapproached in the fullness of recorded time. It crowns with triumph the efforts of genius.

The World's Fair contained no finer statue of the great discoverer than this colossal figure. It commanded from its pedestal the eastern entrance to the Administration building. The majesty of its dimensions, the vigor and aggressiveness of its expression and the artistic finish of its composition made it admired as a genuine sculptural triumph.

### Another Standard Proudly Displayed

at the Fair was that of

## Dr. Price's Cream Baking Powder

A Standard of Excellence for Forty Years.

It was the standard of unequalled strength, perfect purity and wholesome results. The award to Dr. Price's of highest honors at the Fair furnishes conclusive evidence of its superiority over all other baking powders.



with Anne and Margaret; and Chauncey never came.

She never mentioned him; but Anne watching her darling with jealous eyes, saw how her cheeks grew paler, and how listless she seemed to be as the summer days went on.

One night as Anne lay pondering upon these things, with Margaret asleep beside her, she heard a stifled sob from the cot where Helen lay. That was all; but it was not long before Anne had determined what to do. And the next day, on her way home from the village, she stopped at Mrs. Bassett's for the first time since that spring Sunday when Chauncey had lingered at his mother's side.

"It's ever so long since I've had a chance to run in," said Anne. "But I've been busy teaching. It was fortunate for us that the Brentons wished their children to make up all they lost when they had the whooping cough last spring. If it wasn't for that and for two of Margaret's music pupils who have kept right on, I don't know what we would have done!"

It was not like Anne to speak so freely of their difficulties; but Mrs. Bassett showed no signs of unbending. "You know how it is," Anne continued with heightened color. "Pa tries to do all he can, but he's so—unlucky."

"And the last lecture tour wasn't a success?" queried Mrs. Bassett, slipping into Anne's skillfully opened net. "Every one thought he must 'a' been makin' money, the way Helen came out in the spring."

"And didn't she look sweet?" cried Anne. "But people shouldn't judge by appearances! I'm going to tell you, though I shouldn't like it to get around. A cousin of mother's in the city sent us some old clothes. And Helen is just the most ingenious girl you ever knew. The things weren't fit for us, and I thought they'd be of no use; but Helen turned, dyed, and made the old party silks into the prettiest petticoats you ever saw—one for each of us! Then the poor child needed a new dress; she had nothing fit for church, and we couldn't afford to buy anything; but she went to work and somehow made that pretty gray and olive gown out of just nothing! And her bonnet! You ought to have seen it when it came! And all of it never cost us a single penny!"

"You don't say!" cried Mrs. Bassett, in surprise. "But—the pink sunshade? Mandy Ward priced one in the city an' they asked—sixteen dollars?"

"She made that, too!" cried Anne. "Oh, you don't know how clever she is! You won't let this go any further, though?" anxiously. "I wouldn't like everyone to know, because—it was the first time we'd ever had old clothes sent us—and poor mother—cried."

"I won't tell a livin' soul but Chan—I must tell him. He'll be home to-night, you know, over Sunday. An'—an' I'm comin' to see your ma right soon."

Anne went her way with a lighter heart. She had not gone far before Chauncey Bassett himself came into view. Much to her surprise he stopped.

"It's ever so long since I've seen you," he began awkwardly.

"Why didn't you call?" she asked in her cheery way, noting curiously his wan, troubled face.

"I'll tell you why," he said suddenly. "It's because I can't think of anyone or anything but—Helen! I never realized until one Sunday morning in the spring" (Anne sighed) "how far above the farmer's son—the poor book-keeper—she was. Then I saw that the best I could ever hope to give her would not be worthy of her—not even as much as she is having now" (Anne smiled) "and I knew it would be better for me to—to forget her—before she even dreamed I had begun to care. I thought I could turn aside my thoughts, but I can't. And though it is madness to think she could ever care for me, yet I must see her and tell her; and unless you tell me not to, I'm coming this very night."

"Come, then," said Anne, with a reassuring smile.

Supper was over and the girls were putting the things away. As Margaret disappeared in the china closet with a pile of plates, Anne said carelessly,—"Oh, I met Chauncey Bassett as I was coming home, and he said he was coming around to-night."

"Anne! You—you didn't say—anything, did you?"

"You dear little goose! Not a word that the town crier couldn't proclaim with propriety. I thought he was looking thin and worried, poor fellow. I'll wipe the teacups, for you had better light the lamp in the parlor and put on your gray gown directly."

"If he had waited until he had seen his mother, I'd have hated him, almost," thought Anne, an hour later, when above the murmur of voices in the parlor she heard Helen's laugh ring gayly out.

And the next day being Sunday, the gossips had something to talk about, for Mrs. Bassett actually kissed Helen in the church porch. And Chauncey walked home with her as he used to do; but though his face was radiant, no one saw her smiles and blushes, for carefully, almost reverently, Chauncey shielded her lovely face with the pink parasol.

#### Fashion Notes.

Ostrich feather tips are used at the side of collar bands, instead of the loops of ribbon, with great effect.

Little overwaists of black net, with yokes of black satin an inch wide, spotted with jet and crossed checker-board fashion, can be bought ready for use.

The latest bonnets for evening and afternoon wear are, in most instances, all black, made with flat crowns or shapes of net closely spangled and trimmed with rosettes of net or mouseline de soie beaded on the edge, and gauzy wings of wired mouseline with spangles. Where flowers are used they are made in the form of rosettes.

Separate waists are rather increasing in elegance than showing any sign that their popularity is waning. A pretty white satin gown has a cascade of chiffon up one side of the skirt, caught here and there with silver ornaments; chiffon sleeves and a chiffon bertha around the low-cut neck, with a silver tracery at the top. A bunch of scarlet poppies at one side of the neck makes the costume complete.

#### General Grant Was Not a Politician.

To the man's moral and physical courage, and his calm, all but stubborn bearing, he added a magnanimity and an unsuspecting integrity which were at once his strength and his weakness. Herein lay the secret of the love men bore him and of their trust in him. But these characteristics combined with his inexperience of civil life to disarm him against the dishonorable subtleties of pretended friends, thus continually compromising him. Said General Sherman once: "Don't give any person the least encouragement to think that I can be used for political ends. I have seen it poison so many otherwise good characters that I am really more obstinate than ever. I think Grant will be made miserable to the end of his life by his eight years' experience. Think of the reputations wrecked in politics since 1865."—E. Benj. Andrews.

ON one occasion a person who wished to have a little fun at the expense of his constituency said in a group where Horace Greeley was standing: "Mr. Greeley and I, gentlemen, are old friends. We have drunk a good deal of brandy and water together." "Yes," said Mr. Greeley, "that is true enough. You drank the brandy, and I drank the water."

DR. PASHKIEFF, of Russia, advocates the dressing of recently received wounds with a thin layer of ashes prepared by incinerating some cotton stuff or linen. The blood mingles with the ashes and forms a protecting surface, under which the lesion heals rapidly.

## DOMESTIC ECONOMY.

### Hints to Housekeepers.

Use old matting under carpet.

Darn gloves in button-hole stitch, repeated till the hole is filled up.

Grease spots may be removed from wall paper by putting clean blotting paper over them and pressing it with a hot flatiron.

Black kid gloves are sometimes a source of annoyance on account of little white streaks at the seams. This trouble may be diminished by coloring a little salad oil with black ink, then rub this over the white places with a feather; dry quickly outside the window.

A teaspoonful of borax put in the last water in which clothes are rinsed will whiten them surprisingly. Pound the borax so it will dissolve easily. This is especially good to remove the yellow that time gives to white garments that have been laid aside for two or three years.

A method to prevent flannel from shrinking is to hold it over the steam of boiling water. When thoroughly damp it can be immersed. This should be done before the flannel is cut. Skeins of wool to be used in knitting or crocheting are often treated in the same way.

Tomato catsup is many per cent improved if served hot. To heat with little trouble, fill a small bottle with enough of the catsup to serve at one time; cork tightly and stand in a dish of cold water, allowing the water to heat gradually to the boiling point. Set a perforated false bottom under the bottle in the kettle.

Wicks should be held to the fire and thoroughly dried before being used. They absorb a great deal of moisture, and, if not so treated previously, the flow of oil is impeded. Another plan is to steep the wick in vinegar and then dry thoroughly before using. This prevents smoking. Then, again, in some oils there is a certain amount of sediment which sinks to the bottom of the reservoir and settles on that part of the wick which lies there. The oil will not flow in a dirty wick, and when there is not a good flow of oil a good light cannot be obtained. Wicks which have become foul may be cleansed by washing or boiling in soft water and soap, then rinsed and dried. The reservoir lamp should be kept filled; if the oil becomes low the flow of oil is imperfect, and the wick in consequence is charred. This gives only a poor light and emits a disagreeable odor.

AN English court has decided regarding property rights in photographic portraits, that the copyright belongs to the sitters when they order the portrait and pay for its being taken. The only claim for copyright by the photographer is when he invites sitters to have their likeness taken, and when they assent to sit without payment, doing so for purposes of publicity or advertisement.

No one had thought to teach the minister's little girl a verse for Children's Sunday, as she was so small. She said she could say one, and her teacher lifted her up on the organ. Bonniwell folded her little hands demurely, and, with the most seraphic smile, said softly but distinctly, "My papa's fabrit vegetable is custard pie."

GOOD HUMOR makes all things tolerable.—Beecher.

### Domestic Hints.

**COOKIES.**—One teacup of butter, three of sugar, half a cup of milk or cream, three eggs, one small teaspoonful of soda and flour enough to make it rather stiff. Flavor with nutmeg or cinnamon.

**BAKED INDIAN PUDDING.**—One pint of meal, three pints of scalded milk, one teacup of suet shredded and chopped fine, one-half pint of molasses, a little salt, and six or eight apples chopped fine. Mix all together thoroughly. Turn into a buttered pudding dish and bake in a moderate oven four or five hours.

**BROWN BREAD.**—One cup each of rye meal and Indian meal, one-half cup of molasses, one teaspoonful of soda, a little salt. Mix with cold water quite soft. Put into tin pail, cover and bake two or three hours; about half an hour before it is done remove the cover in order to dry off the top.

**CHICKEN CONSOMME.**—Take a chicken, cut it into pieces and put it into a saucepan with two quarts of cold water, and let it simmer gently until the scum begins to rise. Skim until every particle is removed, then add salt, a carrot, an onion and a turnip chopped and a little celery. Boil gently two hours, strain and serve.

**SALSIFY OR OYSTER PLANT.**—Scrape it thoroughly and throw at once into cold water with a little vinegar in it to keep it from turning black. Cook in boiling salted water one hour, or until tender. Drain carefully, mash it with a potato masher and season to taste with butter, pepper and salt. Flour the hands and shape the mashed salsify into small flat cakes. Roll them in flour and fry them in butter until brown or cut into small pieces, dip into a batter made of an egg, flour and salt, and fry in boiling fat.

**CREAMED CODFISH.**—Remove the bones and skin and flake a cupful of the fish. Put it into a saucepan, cover with cold water and set it on the back of the stove where it will keep warm, but not boiling, till softened. If very salty, the water will have to be changed, covering it the second time with warm water. Drain thoroughly in a sieve. Put a generous tablespoonful of butter into a saucepan; when melted, add one tablespoonful of flour, stir till smooth, but not brown; gradually add one cup of rich milk, stir till smooth, then add the fish. Let it heat thoroughly and then add the well-beaten yolks of three or four eggs. Let it cook till it thickens, stirring constantly.

**POTATO PUFF.**—Wash eight large potatoes of uniform size and bake till just done. When done, take them up, break them in two, squeeze out the inside and rub through a sieve. Put a tablespoonful of butter and half a cup of cream into a saucepan and set over the fire. When it boils up, add the sifted potato and season highly with salt, pepper, celery salt and chopped parsley. Remove from the fire, and, when slightly cool, add the beaten yolks of three eggs. Beat the whites to a stiff froth and stir them in gently. Turn into a shallow baking dish, pile it in a rocky form and bake ten minutes, or until it is puffed and browned. A few tablespoonfuls of finely chopped meat—beef or chicken—added makes a pleasant variety.

She shook him once, she shook him twice,  
Yet he was not forsaken.  
Third asking she accepted; 'twas  
"Well shaken before taken." —Judge.

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## Col. Hersey on the Dried-Fruit Market.

San Jose Mercury, 10th inst.

"Fruit is moving steadily upon a constant demand for it to go into the hands of consumers all over the country," said Colonel Philo Hersey at the County Fruit Exchange yesterday in an interview with a Mercury representative upon the condition of the dried-fruit market.

"The opportunities for f. o. b. sales are limited. Nearly all the houses in the East claim that spot goods, those in hand, are what their sales have to be made up of mainly. The prices of all kinds of dried fruit remained uniform during the past week or ten days. The supply is growing less at an encouraging rate, and there is not enough fruit on hand to cause the least apprehension that it will not be all moved out and into the hands of consumers before the dried-fruit season closes.

"The months when dried fruit is in the greatest demand, and when the season is the best, are March, April, May and June, so that over three months still remain during which the market may be reasonably expected to be as lively, if not livelier, than during the opening of the season. As far as some markets are concerned, the demand for dried fruits remains active the year round. In Texas they raise no fruit, and depend almost entirely upon the dried product that is shipped there from California and elsewhere. The demand there is principally for dried apples that cannot be furnished here, but many carloads of prunes and apricots have been shipped to Texas from San Jose. The demand from Montana and Colorado has not been as good this year as during former seasons, on account of the stagnation in mining operations, but the increase in the demand from other localities has more than made up the falling off in trade in that direction.

"The most active demand for dried fruit is supposed to cease about the time that early vegetables and small fruits—strawberries—come into the market, but the Southern States this year, from which most of the early vegetables and small fruits come, experienced an unusually cold winter, causing a setback to the gardens everywhere, and, in consequence, the demand for dried fruit will continue longer than usual this year.

"At present there are about one hundred and fifty carloads of dried fruit of all kinds unsold in this valley. Of this nearly one hundred carloads are dried prunes. This is not nearly so much as last year at this time.

"Of course," said Colonel Hersey, in conclusion, "as far as the prospects for the coming crop are concerned, little can as yet be said with any degree of confidence. The prune trees have good buds and bid fair to blossom strong. There is a general complaint of the weakness of the buds of the Moorpark apricots, and they are dropping badly. This variety, however, as is well known, yields a good crop only once every three years, and as they bore heavily last year, it will be two years before they may be expected to bear strongly again. The remaining varieties of apricots show fairly good buds and blossoms. Prunes will begin to bloom freely in about two weeks. Almonds, the first to bloom, have been out for some weeks. The apricots that followed are almost all in full bloom now, and many peach trees are out. So far, there is every indication of a fine crop this year."

THE Government is testing a new plan for signaling at sea, which has already yielded remarkable results. It consists merely of an ordinary gong fastened to the bow of the ship below the water line. This acts as a transmitter, and the receivers are gongs of exactly similar tone and rate of vibration, one on each side of the ship below the water line. The receiving gong will take up and produce the sound of the sending gong from a long distance. Signals already have been clearly transmitted ten miles.

## A Word of Wise Counsel.

Oroville Register.

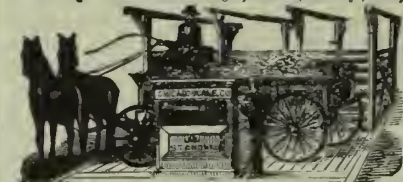
The Woodland people who recently visited Oroville are becoming enthusiastic over orange planting and in consequence are planting many trees. We are glad of this and trust Yolo will profit much thereby. But we hope our neighbors will study the nature of things and not allow their enthusiasm to prevail over their good sense. In other words, let them profit by the experience of others as to the proper conditions under which orange growing may be successfully pursued. All soils, no matter how rich they may be, and how favorable the climate, will not produce oranges successfully. Experience in this section has shown that a light, rather gravelly and thoroughly well drained soil is best adapted to citrus fruits. Good grain or hop or vegetable land is seldom good orange land. We simply make these suggestions in order that our Woodland friends may study their conditions and plant only where they are certain good will result. Butte and Yolo can both grow oranges with great success, but both have thousands of acres of the richest land on earth for other crops on which an orange tree will refuse to thrive and bear.

## Beware of Ointments for Catarrh that contain Mercury.

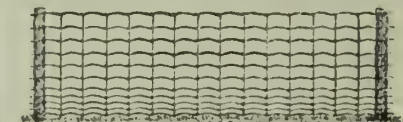
As mercury will surely destroy the sense of smell and completely derange the whole system which enters it through the mucous surface. Such articles should never be used except on prescription from reputable physicians, as the damage they will do is tenfold to the good you can possibly derive from them. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, O., contains no mercury, and is taken internally, acting directly upon the blood and mucous surfaces of the system. In buying Hall's Catarrh Cure be sure you get the genuine. It is taken internally, and made in Toledo, Ohio, by F. J. Cheney & Co. Testimonials free. Sold by Druggists; price, 75c. per bottle.

GREENWICH records show that for fourteen years there has been an average of but twenty hours of sunshine in London in December.

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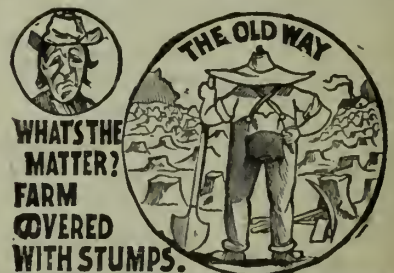
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411-415 SANSOME STREET. SAN FRANCISCO, CALIFORNIA.

## ALEXANDER & HAMMON,

RIO BONITO NURSERIES, Biggs, Butte Co., Cal.

### DECIDUOUS FRUIT TREES

OUR SPECIALTY.

The most Complete Assortment of General Nursery Stock grown on the Pacific Coast.

1,000,000 Trees for the Season of 1894-95 in Stock.

Acknowledged everywhere to be equal to the best. Guaranteed to be healthy and free from scale or other pests.

Send for Catalogue and Prices. Correspondence solicited. Address:

**Alexander & Hammon,**

Biggs, Butte County, Cal.

## FANCHER CREEK NURSERY, FRESNO, - - - - - CALIFORNIA.

Offers a Full and Complete Assortment of

★ FRUIT TREES, ★  
★ OLIVE TREES, ★  
★ GRAPE VINES, ★  
ORNAMENTAL TREES, AND ROSES  
CITRUS TREES.

Send for Descriptive Catalogue and Prices.

ADDRESS

GEO. C. ROEDING, - - - - - MANAGER

INCORPORATED 1884.

500 ACRES.

## California Nursery Company, NILES, CALIFORNIA.

### NURSERY STOCK OF ALL KINDS.

Fruit Trees, Nut Trees, Small Fruits, Ornamental Trees  
and Shrubs, Palms, Flowering Plants, Etc.

SPECIALTY:—All the Italian, French and Spanish Varieties of Olives of  
Note—"True" Spanish Queen, Rubra, Regalis, Etc.

Write us for new Catalogues and Estimates. Prices to suit the times.

JOHN ROCK, : : : : : Manager.

ESTABLISHED 1863.

**THOS. MEHERIN,**  
NURSERYMAN AND SEEDSMAN.

AGENT FOR THE CALIFORNIA NURSERY CO.

### FRUIT TREES.

Large and Complete Stock of Fruit and Ornamental Trees and Plants, at prices to suit the times.

### SEEDS!

GRASS, CLOVER, VEGETABLE, FLOWER AND TREE SEEDS, ETC.

Catalogue mailed free on application. Please mention this paper.

THOS. MEHERIN, 516 Battery Street (P. O. Box 2059). San Francisco, Cal.

## ORANGE TREES at Rock Bottom Prices.

To close out a special lot of three-year buds of Med. Sweets (five-year roots), finely  
branched, 4x6 feet, we offer them at \$25 the hundred.

Write us if you want Med. Sweets or Wash. Navels; we can give you lower prices  
for good trees than any one.

Cal. Fan and Cham. Excelsa Palms, Laurustinus, Dracaena Indivisa, Roses,  
Tuberose, Etc., Etc.

Agents wanted in every town in Northern and Central California where we are  
not represented.

**ALPHA ORANGE NURSERIES,**

MRS. E. M. FRASER, Prop'r  
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PENRYN, PLACER COUNTY, CAL.

FOUNDED 1865.

85 ACRES.

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ALL KINDS OF FRUIT TREES.

DECIDUOUS, ORNAMENTAL AND SHADE TREES, SMALL FRUITS, ETC.

The only nursery offering the true and genuine Loganberry, one of the finest berries ever produced.  
None can equal it. First introduced and offered for sale at this nursery.

Send for catalogue, colored plate and circular.

**JAMES WATERS,**

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ESTABLISHED 1853.

## Stockton Nursery.

Get our Catalogue and Prices be-  
fore purchasing your Trees or  
Anything in the Nursery Line.

Clean, Thrifty, Healthy Stock at  
Prices to Suit the Times.

**E. C. Clowes,**

Stockton, - - - - - California.

## Home Grown Seed.

Our farmer friends, you know you greatly lessen your risks  
when you buy Seed directly from the grower. We raise Seeds of  
the earliest Sweet Corn, the earliest and best Pole and Bush Beans,  
the best earliest and best late market Beets, the best Cucumbers,  
the best of the earliest and latest Drumhead Cabbage, the earliest  
of all the Wrinkled Peas, the best Dwarf and decidedly the best  
of the Marrowfats, the best early and late Squashes, the best market  
Carrot, the earliest Red and the very best of all the Yellow  
Onions. We offer these and numerous other varieties, including  
several valuable new Vegetables, in our Vegetable and Flower  
Seed Catalogue for 1895. Sent free.

J. J. H. GREGORY & SON, Marblehead, Mass.



1838 NEW APPLES, PEARS, NUT TREES & NOVELTIES 57 YEARS  
1894 300 ACRES

Starr, the largest early apple, 12 in. around, marketable 1st week in July; Para-  
gon, Parlin and others. Koonce Pear, early, handsome and delicious. Lincoln  
Coreless, very large and very late; Seneca, Japan Golden Russet, Vr.  
Beauty, &c. Japan Quince Columbia unquelled for jelly. Nuts—Parry's  
Giant, 6 in. around, the largest known chestnut; Paragon, Numb and many others.  
Walnuts—French, Persiau, Japan, English and Am., Pecans, Almonds and Fil-  
berts, Eleagnus Longipes, Japan Mayberries, Hardy Oranges; Dwarf Rocky Mt.  
Cherries, free from insects, black knots and other diseases; Small Fruits, Grapes,  
Currants, &c.; Shade Trees, Ornamental Shrubs, &c. CATALOGUE FREE.

POMONA NURSERIES, - - - - - WM. PARRY, Parry, N. J.

THE FINEST STOCK OF

### Citrus and Deciduous Trees,

BERRIES AND OTHER PLANTS,  
In the State, at the Home Nurseries, Pasadena, Cal.

One and two-year-old Orange and Lemon Trees,  
the finest and thickest stock ever grown any-  
where, and all the best varieties, also Pomelo  
(Grape Fruit), and the Japanese Red Daney Tan-  
gerine Orange; also the best deciduous trees.  
Raspberries, Blackberries and the Wonderful  
Everbearing and other fine varieties of Strawber-  
ries. Nothing but the best of all varieties of  
Fruits and Nuts. Don't fail to write for prices to  
HEWITT & CORSON, Pro'ps, Pasadena, Cal.

### FRUIT TREES.

FRENCH PRUNE, BARTLETT PEARS,  
Apple, Peach, Cherry, Apricot and Almond  
TREES.

First-Class Trees at very low prices.

E. GILL, Nurseryman, Oakland, Cal.

### Thompson Seedless

ROOTED GRAPE CUTTINGS FOR SALE.

Box 57, - - - - - Yuba City, Cal.



### Horticultural Matters in Santa Clara.

Report of Commissioner Brainard for February.

The arrival of nursery stock from abroad has been quite heavy, and with one or two exceptions every lot has been examined, those not examined coming from nurseries the stock of which had been previously examined and found clean. A part of the stock thus arriving consisted of a whole carload of orange and lemon trees, which are found perfectly clean. Olive trees had been disinfected before shipment here.

Advice in regard to the treatment and disinfection of orchards has been given to about one hundred applicants, and between twenty and thirty places have been specially visited to decide upon a line of work. The numbers of beneficial insects continue satisfactory and a large increase is reasonably expected. Half a dozen colonies of twice-stabbed ladybirds have been placed in localities where it did not naturally occur.

Plants imported from Japan, which had been detained at Oakland for fumigation, have been released, as I am notified by Alexander Crow, State Quarantine Officer.

Through the kindness of S. F. Leib, Esq., I have received from Pacific Grove a quantity of chaparral bushes infested with the fungus which has destroyed a large area of scale in that locality, and have planted them where they will be likely to spread the infection here. It is hoped that some results may come from this.

I find that there were many unsatisfactory cases last year in the use of Paris green as a remedy against codlin moth, and losses amounting to several thousand dollars resulted. I am now taking steps to secure and publish the analysis of a good standard article of Paris green, and recommend to fruit growers not to purchase of any dealer who cannot show certificate that his goods are practically up to the standard.

The cause of the failure, I am satisfied, is adulterated Paris green, and every dealer who expects to supply the public should get a certificate that the brand he buys is equal to standard purity. I shall confer with all local dealers to this end. I am satisfied that many thousand dollars can be thus saved.

### Must Change Systems.

Oroville Register.

California is destined to become one of the richest States in the Union, but she must change her system of farming ere this possibility is attained. The big farms, the gigantic orchards, the expanded cattle and hog ranches must be cut up. What this State demands and must have is a multitude of small places—five and ten acre farms and orchards—little tracts that can be managed by the owner and his family. We think the low price of grain is a calamity to California, but in reality it is a godsend. The little farm, well tilled, in California will become a paradise. Thickly populated communities will result and with these will come good roads, better schools, more churches, and a thousand other improvements that we need not enumerate. We must get rid of the land principalities; must do away with the great land estates ere this consummation will be attained, but each year some advance is made in the right direction. If wheat goes down this year to fifty cents a bushel, which it is almost sure to do, then good-by to the big wheat farm of the future. We will continue to grow wheat, but it will be done on well cultivated and well manured land, and no farmer will invest thousands of dollars in costly machinery to be used for a few weeks only during harvest time. Men must grow what they consume and Californians can come as near doing this as any people on earth.

SAN FRANCISCO spent nearly \$40,000,000 for imported merchandise in '94. One-third of that sum could be kept at home under improved and legitimate industrial conditions.

### Coast Industrial Notes.

—The annual report of Charles Sleeper, manager of the San Francisco Clearing-house, gives the clearings in 1894 at \$658,526,806, against \$699,283,778 in 1893—a decrease of \$40,756,972.

The Mexican government has pledged itself to admit free of duty all materials and machinery to be erected on the grounds of the international exposition to be held at the City of Mexico in 1896. Greatly reduced railroad rates are also promised.

—H. A. Robertson, of this city, one of the owners of the big pile raft that went to pieces some months ago while being towed here has commenced on another one near Astoria, Oregon, which, when completed, will cost \$30,000. No attempt will be made to tow it to San Francisco until summer.

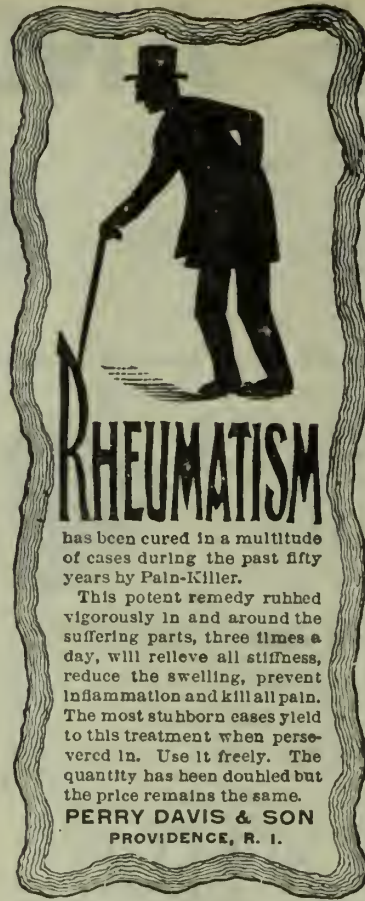
—W. B. Honeyman, of the Portland linseed oil works, has made contracts with Linn county farmers, in Oregon, for 2000 acres of flaxseed, for which he has contracted to pay \$1.80 per hundred. This will bring to the growers something upward of \$20,000. Mr. Honeyman furnishes the seed to sow the 2000 acres.

—The colossal figure of Progress, which will surmount the dome of the City Hall, has been modelled by Marion Wells, the sculptor, and will be soon cast. It is 22½ feet high, and represents a winged female holding aloft a torch. At night this torch will be brilliantly illuminated. It will be over 300 feet above the sea level.

—The New England Fish Company, whose headquarters are at Boston, and who have been fishing for halibut in British Columbia waters all winter, have closed the season's operations. The total catch for the season amounted to 900,000 pounds, and the price realized was about seven cents per fish. Twenty-five cars were shipped east.

—A syndicate of well-to-do Italians have hit upon a novel plan to supply the San Francisco market with fresh halibut. They have purchased the once famous racing yacht Cyclone, and intend putting in a large well amidship capable of holding many thousands of gallons of water. In this way a whole cargo of fish, caught on the halibut banks, can be kept alive until delivered at the city markets. By this means they expect a much higher price for their product than do the fishermen who bring in their product dead.

—James Treadwell, president of the San Francisco and San Joaquin Coal Company, says: "There are twenty million tons of coal in sight near Livermore. The location is eight miles southeast of Livermore, and the seam has been traced six and a half miles in length and a mile in width. This coal is so abundant, and is extracted so cheaply, that it can be mined and shipped to Oakland with a profit at \$1.50 a ton." If so, this would revolutionize manufacturing methods of this city, where cheap fuel is the one great lack.



**RHEUMATISM**

has been cured in a multitude of cases during the past fifty years by Pain-Killer.

This potent remedy rubbed vigorously in and around the suffering parts, three times a day, will relieve all stiffness, reduce the swelling, prevent inflammation and kill all pain. The most stubborn cases yield to this treatment when persevered in. Use it freely. The quantity has been doubled but the price remains the same.

**PERRY DAVIS & SON**  
PROVIDENCE, R. I.

### FOLDING SAWING MACHINE.

**9 CORDS IN 10 HOURS.**

**RUNS EASY. No Backache. FOLDED. SAVES DOWN TREES.**

**BY ONE MAN.** Send for free illustrated Catalogue, showing testimonials from thousands who have sawed from 5 to 9 cords daily. It saws down trees, folds like a pocket knife, weighs only 41 lbs., easily carried on shoulder. One man can saw more timber with it than two men with a cross-cut saw. 67,000 in use. We also make larger sized machine to carry 7-foot saw.

**JAMES LINFORTH,**  
37 Market St., San Francisco.

### Rheumatism, Neuralgia, Sciatica, Backache.

**ST. JACOBS OIL**  
**SAFE, SURE, PROMPT.**

## Protect Your Trees

—WITH—

**Gilman's Patent Tule Tree Protector.**

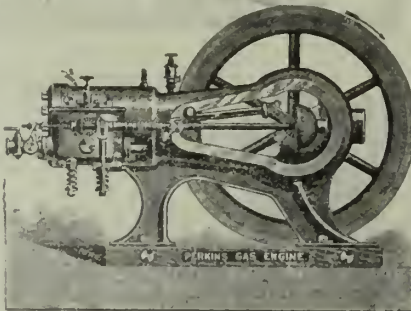
PATENTED AUGUST 1, 1893.



**FIRST PRIZE—Medal and Diploma—California Mid-Winter International Exposition.** Cheapest, best and only one to protect trees and vines from frost, sunburn, rabbits, squirrels, borers and other tree pests. For testimonials from parties who are using them, send for descriptive circulars.

**B. F. GILMAN,**

**Sole Manufacturer of Patent Tule Covers.**  
420 Ninth Street, San Francisco, Cal.



### If you want Power or Pumps

Investigate the

**PERKINS**

**GAS, GASOLINE or OIL ENGINES,**  
**Also PUMPING MACHINERY.**

Prices, according to capacity, \$300 and upwards. Give full particulars for close estimates. Write for catalogue.

**PERKINS PUMP & ENGINE CO.,**  
117 Main St., San Francisco.

### Hitch A Horse To A Hoe.

It's the up-to-date way of cultivating ground. But be sure and hitch him to the

**"PLANET JR." STEEL HORSE HOE AND CULTIVATOR.**

Light, strong and easily controlled by convenient levers. Has separate parts for doing close hoeing, furrowing, or ordinary cultivating. Our free-for-all catalogue tells all about it.

**S. L. ALLEN & CO., Philadelphia, Pa.**

## GRANGERS' BANK

OF CALIFORNIA.  
SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 1874.

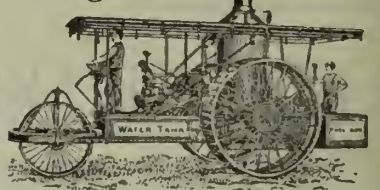


Capital Paid Up.....\$1,000,000  
Reserve Fund and Undivided Profits, 130,000  
Dividends Paid to Stockholders.... 832,000

### —OFFICERS—

A. D. LOGAN.....President.  
I. C. STEELE.....Vice-President.  
ALBERT MONTPELLIER.....Cashier and Manager.  
FRANK MCHULLEN.....Secretary.  
General Banking. Deposits Received, Gold and Silver. Bills of Exchange Bought and Sold. Loans on Wheat and Country Produce a Specialty.  
January 1, 1894. A. MONTPELLIER, Manager

### Price's Traction Engine.



We have one of these engines that was used about one month last season and was taken back by us by reason of illness of purchaser. Engine is in perfect order, and in better working order than when first sent from the factory. A BARGAIN. Indicated power, 30-horse; Cylinders, 8x8; Wheels, 8 ft. high, 28 in. weight, less than 10 tons. Price when new, \$4500.

**HOOKE & CO.,**

16 and 18 Drumm Street, San Francisco.

## THE OWEN ELECTRIC BELT



Trade Mark—Dr. A. Owen

### FOR MEN AND WOMEN

The latest and only scientific and practical Electric Belt made, for general use, producing a genuine current of Electricity, for the cure of disease, that can be readily felt and regulated both in quantity and power, and applied to any part of the body. It can be worn at any time during working hours or sleep, and

### WILL POSITIVELY CURE

**RHEUMATISM  
LUMBAGO  
GENERAL DEBILITY  
LAME BACK  
NERVOUS DISEASES  
CHRONIC DYSPEPSIA  
AND FUNCTIONAL  
DERANGEMENTS**

### WITHOUT MEDICINE

Electricity, properly applied, is fast taking the place of drugs for all Nervous, Rheumatic, Kidney and Urinal Troubles, and will effect cures in seemingly hopeless cases where every other known means has failed.

Any sluggish, weak or diseased organ may by this means be roused to healthy activity before it is too late.

Leading medical men use and recommend the Owen Belt in their practice.

### OUR LARGE ILLUSTRATED CATALOGUE

Contains fullest information regarding the cure of acute, chronic and nervous diseases, prices, and how to order, in English, German, Swedish and Norwegian languages, will be mailed, upon application, to any address for 6 cents postage.

**The Owen Electric Belt and Appliance Co.**

MAIN OFFICE AND ONLY FACTORY,  
The Owen Electric Belt Co., 201 to 211 State Street,  
CHICAGO, ILL.

The Largest Electric Belt Establishment in the World  
MENTION THIS PAPER.

### SAMPLE American Bee Journal.

(Established 1861).  
**FREE** Weekly, \$1 a year. 7 Editors.  
160-page Bee-Book Free!

All about Bees and Honey

**G. W. YORK & CO.**

58 Fifth Ave.,  
CHICAGO, ILLINOIS.

**BEEKEEPERS SEND FOR**  
Sample copy of  
**CLEANINGS IN BEE CULTURE.**  
A Handsomely Illustrated  
Magazine, and Catalog of BEE SUPPLIES  
**FREE. THE A. T. ROOT CO., Medina, O.**



F. MARKET REPORT.

Market Review.

SAN FRANCISCO, March 13, 1895.

FLOUR—We quote: Net cash prices for Family Extras, \$3 25 to 3 35; Bakers' Extras, \$3 15 to 3 25; Superfine, \$2 10 to 2 40 bbl.

BARLEY—It seems difficult to arouse any enthusiasm in the Barley market. Available stocks for immediate feed uses are not very large, but they are more than enough to meet current wants. As a consequence, there is no buoyancy in prices. There have been one or two upward spurts of late, in which quotations were marked up 2½¢ to 3¢ cbl, but the improvement was not lasting, and a relapse to old figures almost immediately followed. At the moment the spot market may be reported as both quiet and easy. We quote: Feed, fair to good, 75¢ to 76½¢; choice, 77½¢; brewing, 85¢ to 90¢ cbl.

WHEAT—The market is fairly active, with prices moderately steady. Shippers are taking all parcels of suitable character on a basis of 87½¢ to 91¢ for No. 1 quality, with the usual advance of ¼¢ for choice grades. Some holders want 90¢; but, so far, no purchases for export have been made at such quotation. Offerings are not of large proportions, and this circumstance helps to keep prices in a rather steady position. More liberal submissions would probably cause greater activity in local shipping circles. Milling Wheat is in moderate request at a range of 92½¢ to 95¢ cbl. Walla Walla Wheat is quotable at 78½¢ to 81¢ for fair average quality, 82½¢ to 87½¢ for blue-stem and 75¢ to 77½¢ for damp.

OATS—Sellers are rather contented at the situation. There is a steady flow of small orders coming in, which, in the aggregate, makes up a fairly respectable total. Prices are moderately firm and are expected to remain in that condition for a time at least. Receipts just now are not large, but here are stocks on hand sufficient to satisfy all expected demands. We quote: Milling, 57¢ to 58½¢; Surprise, 57½¢ to 58½¢; fancy feed, 57½¢ to 58½¢; good to choice, 55¢ to 56½¢; fair to good, 50¢ to 51½¢; poor to fair, 45¢ to 47½¢; Black, 51¢ to 52½¢; Red, 51¢ to 52½¢; Gray, 55¢ to 56½¢ cbl.

CORN—The demand is neither general nor pressing, and prices show easy feeling. We quote: Large Yellow, 51¢ to 52½¢; small Yellow, 51¢ to 52½¢; White, 51¢ to 52½¢ cbl.

RYE—Quotable at 85¢ to 87½¢ cbl.

BUCKWHEAT—Quotable at 80¢ to 85¢ cbl.

MIDDLINGS—Quotable at 18¢ to 19¢ ton.

BRAN—Quotable at 13¢ to 14¢ ton.

GROUND BARLEY—Quotable at 17¢ to 18¢ ton.

HAY—Market quiet, with prices favorable to buyers. Supplies are in excess of immediate requirements and lower quotations in the near future are not unlikely. Wire-bound Hay sells at \$1 75 to \$1 85 per ton, depending on the quality. Following are the wholesale city prices for rope-bound Hay: Wheat, \$8 to \$11; Wheat and Oat, \$8 to \$10 50; Oat, \$8 to \$10 50; Alfalfa, \$8 to \$9 50; Barley, \$8 to \$10; Clover, \$8 to \$9 50; Compressed, \$8 to \$10 50; Stock, \$6 to \$7 ton.

STRAW—Quotable at 70¢ to 80¢ bale.

FEED—Manhattan Horse Food (Red Ball Brand) in 100-lb. bags, \$8; Manhattan Egg Food, 100-lb. bags, \$11 50.

BEANS—A much better demand has developed of late, and prices of several descriptions show improvement in consequence. We quote as follows: Bayos, 51¢ to 52½¢; Butter, 25¢ to 26¢ for small and 25¢ to 26¢ for large; Pink, 51¢ to 52½¢; Red, 51¢ to 52½¢; Lima, 44¢ to 45¢; Pea, 52¢ to 53¢; Small White, 52¢ to 53¢; Large White, 52¢ to 53¢; Blackeye, 52¢ to 53¢; Red Kidney, 52¢ to 53¢; Horse, 51¢ to 52½¢ cbl.

SEEDS—The market is not active. We quote: Mustard, Brown, 51¢ to 52½¢; Yellow, 52¢ to 53¢; Tiesie, 51¢ to 52½¢; Canary, 34¢; Hemp, 34¢ to 35¢; Rape, 13¢ to 14¢; Timothy, 54¢ to 55¢; Alfalfa, 74¢ to 75¢ cbl; Flax, 52¢ to 53¢ cbl.

POTATOES—Fair trade at steady prices. Supplies are ample. We quote: New Potatoes, 1½¢ to 2¢ lb; Early Rose, 45¢ to 55¢; River Reds, 20¢ to 30¢; Burbanks, 45¢ to 50¢; Oregon Burbanks, 40¢ to 50¢; Salinas Burbanks, 75¢ to 81¢; Sweet, 75¢ to 81¢ to 25 for Rivers and 60¢ to 62¢ cbl for choice stock.

ONIONS—Choice stock commands full figures, the quotable range being 51¢ to 53¢ cbl for desirable offerings. Poor qualities sell at 50¢ to 80¢ cbl.

VARIOUS—Asparagus broke again in price yesterday, under receipts of 400 boxes. Rhubarb also weakened, the supply yesterday footing up 405 boxes. No Tomatoes nor String Beans yesterday. Arrivals of Peas were 21 sks. We quote as follows: Hothouse Cucumbers, 40¢ to 51¢ dozen; Asparagus, 30¢ to 35¢ lb; Rhubarb, 60¢ to 61¢ box; Green Peas, 30¢ to 35¢ lb; Green Peppers, 10¢ to 12½¢ lb; Turnips, 50¢ cbl; Beets, 60¢ to 75¢ sack; Carrots, 30¢ to 50¢; Cabbage, 60¢ to 70¢ cbl; Garlic, 30¢ to 34¢ lb; Cauliflower, 30¢ to 40¢ dozen; Marrowfat Squash, 15¢ to 18¢ ton; Hubbard Squash, 12¢ to 14¢ ton; Dried Peppers, 12½¢ to 15¢ lb; Dried Okra, 12½¢ lb.

FRESH FRUIT—The demand for Apples is mainly for the more choice qualities. We quote as follows: Apples, 50¢ to 51¢ per box, with \$1 25 to 1 50 for fancy.

CITRUS FRUIT—Six cars of Oranges came in yesterday morning. The demand is good and desirable stock sells well. Mexican Limes are quite scarce. We quote as follows: California Navels, 51¢ to 52½¢; Seedlings, 75¢ to 81¢ 60 box; Mexican Limes, 37¢ to 40¢ box; Lemons, Sicily, 33¢ to 34¢; California Lemons, 51¢ to 52¢ for common and 52¢ to 53¢ for choice.

TROPICAL FRUIT—We quote: Bananas, 51¢ to 52¢ bunch; Pineapples, 52¢ to 53¢ dozen.

DRIED FRUIT—Supplies in local depots are said to be small, while a fair amount of stock is understood to be stored at interior points. Some little inquiry prevails all the time, so that trade is kept in moderate motion. Apricots have been receiving some attention of late and stocks are being gradually absorbed. Desirable qualities of nearly all the leading kinds are reported as somewhat scarce, most of the offerings being of the cheaper grades.

Following are the prices furnished by the Fruit Exchange. The figures presented represent carload lots, small parcels occasionally selling at slightly lower rates:

Apricots—Fancy Moorpark, 80¢; choice, 80¢, 7½¢; fancy, 70¢; choice, 60¢; standard, 54¢; prime, 50¢. Apples—Evaporated, 54¢ to 57¢; sun-dried, 46¢ to 50¢. Peaches—Fancy, 70¢; choice, 64¢; standard, 53¢; prime, 54¢; peeled, in boxes, 12¢ to 13¢. Pears—Fancy, halves, 54¢; quarters, 44¢; choice, 44¢; standard, 34¢; prime, 30¢. Plums—Pitted, 40¢ to 45¢; unpitted, 1½¢ to 2¢. Prunes—Four sizes, 4½¢ to 4¢. Nectarines—Fancy, 70¢; choice, 64¢; standard, 60¢; prime, 54¢. Figs—White, choice, 40¢ to 45¢; Black, choice, 20¢ to 24¢. Raisins—In sacks (50-lb. boxes selling at ¼¢ lb. higher): 4-crown, loose, 4¢; 3-crown, 2½¢; 2-crown, 2¢; seedless Sultanas, 3¢; seedless Muscates, 2¢ lb; 3-crown London Layers, 51¢ to 52¢ box in 20-lb. boxes; clusters, 51¢ to 50¢; Dehesa clusters, 52¢; Imperial clusters, 53¢; 4-crown, loose, 51¢ to 52¢; 4-crown, loose, faced, 51¢ to 52¢ box. Dried Grapes—1½¢ to 1½¢ lb.

ters, 52¢; Imperial clusters, 53¢; 4-crown, loose, 51¢ to 52¢; 4-crown, loose, faced, 51¢ to 52¢ box. Dried Grapes—1½¢ to 1½¢ lb.

HONEY—Trade slow, with little prospect of immediate improvement. We quote: Comb, 10¢ to 12¢; water white extracted, 70¢; light amber extracted, 5½¢ to 60¢; dark amber, 50¢ to 55¢ lb.

BEESEWAX—Quotable at 28¢ lb.

BUTTER—The current of the market is all one way, and that is against sellers. Receipts continue heavy and surplus stock is found at nearly all depots. Creamery—Fancy, 15¢ to 16¢; seconds, 14¢ to 14½¢ lb. Dairy—Fancy, 13¢ to 13½¢; good to choice, 12¢ to 12½¢; fair, 10¢ to 12¢; store lots, 8¢ to 9¢.

CHEESE—Supplies are liberal and somewhat in excess of the demand, causing easy feeling in values. We quote: Choice to fancy, 7½¢ to 8½¢; fair to good, 60¢ to 70¢; Eastern, ordinary to fine, 11¢ to 14¢ lb.

EGGS—Many dealers are putting Eggs in cold storage; but offerings are more than enough to satisfy present wants and low prices continue to rule. Quotable at 10¢ to 13¢ dozen.

POULTRY—There is improving tone to the market, as Eastern arrivals have been light of late. Turkeys and Roosters are doing better, while top figures are promptly obtained for choice Hens. The demand, however, is not particularly brisk. We quote as follows: Live Turkeys—Gobblers, 10¢ to 11¢; Hens, 11¢ to 12½¢ lb; dressed Turkeys, 12¢ to 14¢ lb; Roosters, 35¢ to 50¢ for old, and \$6 to \$7 50 for young; Broilers, \$3 to \$4 for small and \$5 to \$6 for large; Fryers, \$5 to \$6; Hens, \$5 to \$6 50; Ducks, \$5 to 7; Geese, \$1 25 to \$1 75 pair; Pigeons, \$2 to 2 50 dozen.

WOOL—Trade just now is nominal. Shearing has commenced in several sections, but consignments of spring clip are not likely to be heavy enough to admit of general activity for several weeks to come. We quote fall:

Free Northern, 7 to 8½¢  
Northern, defective, 5 to 7¢  
Southern & San Joaquin, light and free, 5 to 6¢  
Do, defective, 3 to 4¢

HOPS—Recent shipments embrace 13,000 lbs to Australia by steamer and 12,000 to Canada via the Victoria steamer and the Canadian Pacific rail road. Quotable at 40¢ to 70¢ lb, as to quality.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING FEBRUARY 26, 1895.

534,776.—PRUNE PRICKER—A. L. Bancroft, S. F.  
534,777.—AMALGAMATOR—Bandoon & Southern, Grass Valley, Cal.  
534,737.—PROPELLER—J. J. Brandt, S. F.  
534,783.—FRUIT GRADER—A. Cerruti, S. F.  
534,866.—PULVERIZER—W. E. Downs, Sutter Creek, Cal.  
534,875.—DUST PAN—K. W. Gress, S. F.  
534,644.—SAWMILL CARRIAGE—D. B. Hanson, S. F.  
534,904.—POWER TRANSMITTER—J. W. I. Morris, Sumnerland, Cal.  
534,915.—GEAR PROTECTOR—W. Richardson, Truckee, Cal.  
534,667.—BELT GUIDE—M. G. Ring, Sherman, Cal.  
534,993.—DREDGER—A. W. von Schmidt, S. F.  
534,922.—SICKLE BAR—J. Shenett, Gardiner, Or.  
534,772.—HYDRAULIC MOTOR—S. J. Tutthill, Ashland, Or.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible by mail or telegraphic order. American and Foreign patents obtained, and general patent business for Pacific Coast Inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Buff Leghorns.

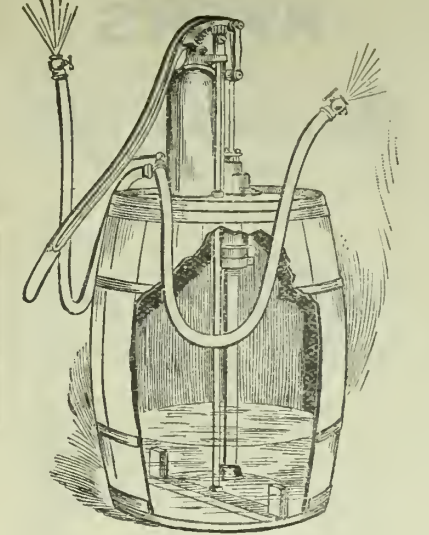
For beauty and egg production the Buff Leghorns have made a great hit in California. One of the finest strains of these favorite birds is to be found in the yards of C. W. Hansen at San Mateo, several of which took first prizes in the recent poultry show held in this city. Choice eggs for setting can be had by ordering now; and what is of importance to those wanting pure stock, absolute reliance may be placed upon getting just what is ordered. For prices, see the advertisement under the head of "Poultry."

Orange Trees for Sale.

Ten thousand budded Orange trees, Navels, Med. Sweets and Parson Brown, budded from trees which gained first prizes at Midwinter Fair, to be sold at great bargains. Address J. Parker Whitney, Rocklin, Placer Co., Cal.

WANTED!

Position as Manager on a Large Farm. Thorough acquaintance with Stock Raising Dairy Business. General Farming. Experience in foreign countries; French, English, German correspondence; Bookkeeping; Graduate of Agricultural Academy in Germany. P. O. box 1855, Bakersfield, Kern County, Cal.



SPRAYING PUMPS.

Every year the necessity of prompt, vigorous and intelligent efforts against the depredations of fungus and insect pests becomes more apparent. Prof. Bailey of Cornell says, "Spray, spray, spray." Prof. Galloway of Washington says, "Spray, spray to prevent fungus, spray to prevent potato rot, spray to kill insects." So again we must urge our readers to study this subject of spraying carefully and be thoroughly posted when the season for hostilities should begin. The most important consideration is a satisfactory pump, a thoroughly good nozzle, and an automatic agitator that will keep the poison and water in the cask thoroughly mixed. The latest improvement in that line is offered by the Field Force Pump Co., of Lockport, N. Y. (see illustration), who are an old established and responsible firm and will do as they agree. By sending 4 cents in stamps and mentioning this paper they will mail you their catalogues and also their calendar of instructions.

"INDURINE" COLD WATER PAINTS.

A Most Remarkable Material is the OUTSIDE INDURINE. It stands rain and exposure as well as oil paint and costs only a fraction as much.

It is just the thing for fences, outbuildings, factories, etc., being cheap, durable and easily applied by anyone.

It has no equal as a light reflector for light-shafts and court-yards of large buildings. It is supplied in a thick paste, to be diluted with cold water. It is made in white and several colors.

INSIDE INDURINE is designed especially for factories, stables, and general inside work, as a substitute for whitewash, kalsomine or oil paint.

It will not rub or scale, soften or darken with age, and works well over old whitewash. A dry powder to be mixed with cold water.

Both Indurines are perfectly fire-proof.

Send for circular and prices to WM. BURD, MANUFACTURER, Mills Building, San Francisco, Cal.

NOTICE.

THE ANNUAL MEETING OF THE STOCK-holders of the Grangers' Business Association, a corporation, for the election of a Board of Directors, and for the transaction of such other business as may properly come before it, will be held at No. 108 Davis street, San Francisco, at 10 o'clock A. M., WEDNESDAY, April 10th, 1895. I. C. STEELE, President. CHARLES WOOD, Secretary.

WANTED.

A SITUATION ON A PRIVATE DAIRY OR IN A CREAMERY by a competent man. Thorough education and training in the management of thoroughbred stock, veterinary science and butter making. An expert on the Babcock test. Best of references. Correspondence solicited. Address DAIRYMAN, care RURAL PRESS.

LEE D. CRAIG,

Notary Public and Commissioner of Deeds, 316 MONTGOMERY STREET, Bet. California and Pine, SAN FRANCISCO, CAL.

LARGEST WELL MACHINERY Works.

All kinds of tools. Fortune for the driller by using our Adam's line process, can take a core. Perfected Economical Artesian Pumping Rigs to work by Steam, Air, etc. Let us help you. THE AMERICAN WELL WORKS, Aurora, Ill.; Chicago, Ill.; Dallas, Tex.

J. K. ARMSBY COMPANY.

CHICAGO.....SAN FRANCISCO  
BOSTON.....LOS ANGELES

Largest Handlers of Dried Fruits.

If you have a parcel to offer, submit samples to us,

We are the principal handlers

MOORE, FERGUSON & CO.  
WOOL, GRAIN, FLOUR

General Commission Merchants,  
310 CALIFORNIA ST., S. F.  
Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

HEALD'S  
Business College,

24 Post Street, San Francisco.  
FOR SEVENTY-FIVE DOLLARS

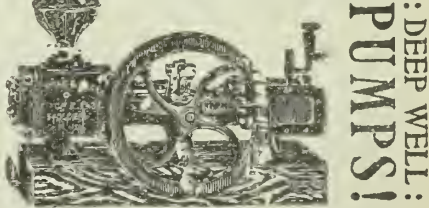
This College instructs in Shorthand, Type-Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils.

A Department of Electrical Engineering Has been established under a thoroughly qualified instructor. The course is thoroughly practical. Send for Circular. C. S. HALEY, Sec.

C. H. EVANS & CO.,

(Successors to THOMSON & EVANS.)  
110 & 112 BEALE STREET, S. F.

MACHINE WORKS,  
Steam Pumps. + Steam Engines.  
All Kinds of MACHINERY.



TREE - WASH.

Olive Dip.  
"Greenbank" Powdered Caustic Soda and Pure Potash.

T. W. JACKSON & CO.  
Sole Agents, No. 226 Market Street  
SAN FRANCISCO, CAL.

WAGON AND PLATFORM SCALES

HOOKE & CO. 18-18 DRUMM STREET, S. F.

"ACME" PULVERIZING HARROW, CLOD CRUSHER and LEVELER.



Adapted to all soils and all work.—Flat crushing spurs pulverize lumps, level and smooth the ground, while at the same time curved coulters cultivate, cut, lift and turn the entire surface of the soil. The backward slant of the coulters prevents tearing up rubbish and reduces the draft. Made entirely of cast steel and wrought iron—PRACTICALLY INDESTRUCTIBLE. Cheapest Riding Harrow on Earth. Sells for about the same as an ordinary drag. An extensive fruit grower in Fresno County says:—"The 'ACME' Harrow has the past season in our orchard proved that it is the 'boss' of all. Candidly we are convinced that it saved our orchards in the past dry season by placing the surface in good order which answered as a mulch and retained what moisture fell during the winter and spring of 1894. We can show a growth on apple trees this dry season of 7 feet and over. We only had 2½ inches of rain to produce this growth. We did this, we believe, by the use of the 'ACME' Harrow, and cheerfully recommend it in preference to any tool made for a cultivator."

N. B.—I deliver free on board at PORTLAND and SAN FRANCISCO.  
DUANE H. NASH, Sole Manufacturer, MILLINGTON, N. J. and 30 South Canal Street, CHICAGO, ILL.  
(Mention This Paper.)



## Patrons of Husbandry.

### San Jose Grange.

The regular weekly meeting of San Jose Grange was unusually well attended and long in its deliberations. Master Worthen was in the chair, Mrs. Worthen secretary. The time was taken up principally with preparations for the visit of District Inspector Hon. J. L. Beecher of Stockton. The secret work, degrees, harvest marches, initiation ceremonies were rehearsed and everything went off in a style that gave promise that the grange would be up in its work and acquit itself in the most creditable manner possible on inspection day, which will be Saturday, April 13th. The office of district inspector and the appointment of inspector day is something new in grange work. It was inaugurated only this year. Mrs. Worthen was appointed district deputy lecturer. The result of the inspection as compared with the work of other granges in the State is not feared. State officers and others who have visited San Jose have expressed themselves as being very favorably impressed with the character of the work, extent of membership, etc., of San Jose Grange. State Lecturer Goodenough said recently that the organization in this city was the best in the work of any in the State and had the largest and most influential membership. At present the grange has 170 members, a large percentage of whom attend the meetings regularly.

The question of securing from the supervisors the appointment of a county board of health, or the extension of the San Jose board of health beyond the city limits, was again discussed. It was urged that the city health officer should have the power to investigate the condition of the dairies in the country, from which the principal milk supply of the city is derived.

The committee appointed by the grange, consisting of S. P. Saunders, R. P. McGlinchey, Herman Pomeroy, Amos Adams and Dr. H. A. Spencer, reported that they had presented the matter of securing some tribunal by which cattle suspected of being diseased might be examined. The supervisors had considered the matter favorably, but it was suggested that action had better be delayed till it was developed what would be done by the State in the matter. A State health officer is about to be appointed, and his duties may include the inspection of cattle in the various counties either personally or by deputies.

It was also reported that some of the supervisors and others had intimated that the reports about tuberculosis being prevalent among cattle in California were either exaggerated or entirely without foundation. It was stated that the origin and spread of lung disease and other affections among live stock in the East was because of the fact that the climate and other causes necessitated their confinement in stables during the greater portion of the year. In California, however, the cattle are out in the open air and fields almost all the year round and most of the time they get green grass. Because of this fact they are kept comparatively, if not entirely, free from disease.

President C. W. Childs of the State Normal School said he had no doubt that on account of the superior climate and other advantages the live stock in California is freer from disease than elsewhere, the same as is the case with the human family, but it is certain that tuberculosis exists in the milk cattle here and cattle that are killed daily to replenish the meat supply. The facts are at hand to controvert any theories that may be advanced to prove that the reports concerning tuberculosis are without foundation. Professor Childs said that recently Miss Washburn, one of the faculty at the Normal, secured a portion of the lung of a cow, whose meat was sold in a butcher shop in this city. Under the microscope the lung tissues were revealed to be full of the bacilli of tuberculosis.

"BROWN'S BRONCHIAL TROCHES" are an effectual remedy for all Bronchial Affections.

## AYER'S THE ONLY Sarsaparilla ADMITTED

### READ RULE XV.



"Articles that are in any way dangerous or offensive, also patent medicines, nostrums, and empirical preparations, whose ingredients are concealed, will not be admitted to the Exposition."

Why was Ayer's Sarsaparilla admitted? Because it is not a patent medicine, not a nostrum, nor a secret preparation, not dangerous, not an experiment, and because it is all that a family medicine should be.

### At the WORLD'S FAIR Chicago, 1893.

Why not get the Best?

## Short-Horn Bulls OF MILKING STRAINS.

CALVES, YEARLINGS AND TWO-YEAR-OLDS.

### ROBERT ASHBURNER,

Baden Station, San Mateo Co., Cal.

The cars of the S. F. and San Mateo Electric Road pass the place

## Five Bulls For Sale. SHORT-HORNS.

Good ones: come and see them and you will buy them. Three 16 months old, two over two years old. All sired by the celebrated bull Baron Buttefly: all thoroughbred, and contain good show timber. One of the two-year-olds won First Prize at State Fair in Sacramento, 1893, as a calf. Some of them are of the best milking families. I also have JACKS and JENNETS for sale, pure Mammoth French stock. Intending purchasers met at train, per agreement by letter. Address E. S. DRIVER, Antelope, Sac. Co., Cal. Antelope is on the Overland R. R., 14 miles north of Sac. City.

## 6 YOUNG SHORT-HORN BULLS 6 FOR SALE.

From good milking strains: are eligible to record. I will make low prices to close them out. Also fine young BERKSHIRE and POLAND-CHINA SOWS, from imported stock.

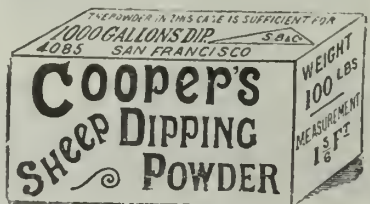
P. H. MURPHY,  
PERKINS, SACRAMENTO COUNTY, CAL.

## Jacks and Jennets,

RAISED FROM IMPORTED STOCK, for sale by V. GIANELLA, Honent, Butte county, Cal.

## EGGS FOR HATCHING,

In large or small lots, from Barred Plymouth Rock, S. C. Brown Leghorn and Black Minorcas, at 50c per doz. MRS. J. G. FREDERICKS, Madison, Cal.



## SURE CURE FOR SCAB.

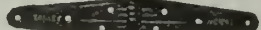
PRICE, \$16 PER CASE.

Sole Agents,

SHOOBERT, BEALE & CO.,  
418 California St., San Francisco, Cal.

## HANG YOUR DOOR

WITH STANLEY'S  
Corrugated Steel Hinges.  
They are Stronger, Handsomer  
and cost no more than the old  
style. For sale by Hardware  
Dealers generally, but if not in  
your vicinity write the Manu-  
facturers. Send for "Biography  
of a Yankee Hinge," mailed free.



THE STANLEY WORKS, New Britain, Ct.

## Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

### Horses and Cattle.

P. H. BURKE, 626 Market St., S. F. All Prize Hosiery; Grade Milch Cows. Fine Pigs.

BULLS—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

FRESH JERSEY HEIFERS for sale. Sulphur Spring Farm, Niles, Cal.

JERSEYS—The best A. J. C. C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale.

P. H. MURPHY, Perkins, Sac. Co., Cal. Breeder of Shorthorn Cattle, Poland-China & Berkshire Hogs.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

PETER SANE & SON, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

### Poultry.

J. W. FORGETT, Santa Cruz, Cal., has the best stocked and equipped poultry ranch on the Pacific coast, and makes a specialty of Barred P. Rocks, Brown Leghorns, Black Minorcas, Pekin Ducks. Seventy acres to Leghorns, six acres to Minorcas, and my home ranch to Barred P. Rocks and Pekin Ducks. I guarantee satisfaction in every order. Exhibition birds and breeding stock. Eggs for sale. Prices reduced to fit hard times. Reference, People's Bank.

BUFF LEGHORNS—Eggs from prize winners, \$1.25 and \$3 per thirteen. Incubator lots at reduced rates. C. W. Hansen, San Mateo, Cal.

C. NISSON, Petaluma. Brown Leghorns. Fowls and eggs at all seasons in any quantity. Circular free. "Nisson on Incubation," 25 cts.

BRONZE TURKEY EGGS for sale, \$3 per setting. Mrs. W. Weaver, Anderson, Shasta Co., Cal.

WELLINGTON'S IMPROVED EGG FOOD for poultry. Every grocer and merchant keeps it.

FRED GLAZIER, Wheatland, Cal. Brown Leghorn Eggs, 50 cts. per 13.

BROWN LEGHORNS a specialty. Stock for sale. Eggs, \$1.25 and \$3 per 13. Reduction on incubator lots. Matthias & Blom, Sacramento, Cal. Box 149.

A. BESCHKE, Tracy, Cal. Breeder of thoroughbred White Leghorns, B. P. Rocks, Pekin Ducks. Eggs, \$1.50 per 13.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for illustrated and descriptive catalogue, free.

R. G. HEAD, Napa, Cal. breeds all kinds pure bred fowls, 400 choice birds to select from.

### Sheep and Goats.

J. B. HOYT, Bird's Landing, Cal. Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale. Prices to suit the times. Correspondence solicited.

R. H. CRANE, Petaluma, Cal. Southdown Sheep.

### Swine.

P. H. BURKE, 626 Market St., S. F.—BERKSHIRES.

CHAS. A. STOWE, Stockton, Berkshire and Poland-China Hogs.

M. MILLER, Eliso, Cal. Registered Berkshires.

J. P. ASHLEY, Linden, San Joaquin Co., Cal. Breeds Poland-China, Essex and Yorkshire Swine.

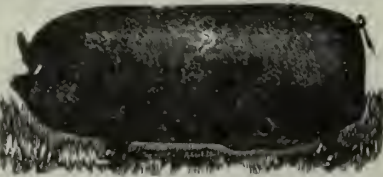
TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.

## FRANK A. BRUSH,

SANTA ROSA, CAL. (Care Santa Rosa National Bank) Importer, Breeder, Exporter.

S. C. White Leghorns,  
S. C. Brown Leghorns,  
Barred Plymouth Rocks,  
Black Minorcas.

Eggs, \$3 per 13. Send for Circular.



## BERKSHIRES.

We received many compliments for our herd from visitors at the State Fair. We competed for 13 ribbons and won 11, as follows: 2 special; 2 sweepstakes; 3 firsts; 4 seconds.

We have a few Choice Pigs for sale.  
SESSIONS & CO.,  
P. O. Box 626, Los Angeles, Cal.

## MANHATTAN STOCK FOOD

Feed our Poultry Food and you will have healthy chickens and lots of eggs. Ask your dealer for it.

## Little's Chemical Fluid Non-Poisonous SHEEP DIP.

Beware of Cheap Imitations. One gallon, mixed with 60 gallons of cold water, will dip thoroughly 80 sheep, at a cost of one cent each. Easily applied: a nourisher of wool; a certain cure for scab. Little's Dip is put up in red, iron drums, containing 5 English or 24 American gallons, and is sold to the trade by the English gallon. For the convenience of our many customers it is also put up in one-gallon packages, for which we make no extra charge. Each drum and package bears the orange label of "Little's Dip."



CATTON, BELL & CO.,  
(Successors to Falkner, Bell & Co.) 409 California St., San Francisco.

**NEW 68 PAGE CATALOGUE**  
AND GUIDE to Poultry Raisers for 1895.  
Contains over 180 fine illustrations showing a photo of the largest henhouse in the world. Gives best plans for poultry houses, sure remedies and recipes for all diseases, also valuable information on the kitchen and flower garden sent for only 10 cents. John Bauscher, Jr., P. O. Box 74, Freeport, Ill.



## In These Dull Times You Can Largely Increase

Your income by buying an incubator and engaging in the chicken business. Send stamp for a catalogue of incubators, with netting, blooded fowls and poultry appliances generally. Remember the Best is the Cheapest. PACIFIC INCUBATOR CO., 1317 Castro St., Oakland, Cal.

**CATALOGUE FREE. SEND FOR IT.**  
ADDRESS: J. BEAR & SON, WEST DUNDAS, CALIFORNIA.  
THE PRIDE OF ALL CALIFORNIA IS THE  
**Le Grand Poultry Ranch**  
And their Wonderful Egg Producing S.W. Leghorns  
Every Bird a Picture and have no equal last or best.  
The food for the Ranchman because purest largest and best.  
SPECIAL LARGE ORDERS FOR THE HATCHES



## THE HALSTED & INCUBATOR COMPANY, 1312 Myrtle Street, Oakland, Cal. Send Stamp for Circular.

**HATCH CHICKENS BY STEAM**  
WITH THE MODEL  
**EXCELSIOR INCUBATOR.**  
Thousands in Successful Operation.  
SIMPLE, PERFECT, and SELF-REGULATING.  
Guaranteed to hatch a larger percentage of fertile eggs, at less cost than any other incubator.  
Send 6c. for Illus. Catalogue. Circulars Free.  
GEO. H. STAHL, 114 to 122 S. 6th St., Quincy, Ill.

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**INCUBATORS**  
We Warrant  
The Reliable  
Tullach super centenary incubators  
Durable, Correct in Principle, Leaders  
at World's Fair. Sets in stamps for  
new 12 page Poultry Guide and Catalogue.  
Reliable Incubator and Brooder Co., Quincy, Ill.  
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**THE IMPROVED VICTOR  
INCUBATOR**  
Hatches Chickens by Steam  
Absolutely self-regulating.  
The simplest, most reliable  
and cheapest first-class fletcher  
in the market. Circulars free.  
GEO. E. TELFER & CO., Quincy, Ill.

**SUCCESSFUL  
INCUBATOR**  
A catalogue giving full  
information regarding  
artificial hatching and  
brooding, also a treatise  
on poultry raising, sent  
FREE. Write now to  
Des Moines Incubator Co.,  
Box 17, Des Moines, Ia.

**GUARANTEED**  
absolutely self-regulating and  
to hatch 80 per cent. of the fer-  
tile eggs. Self-regulating Brooders.  
Most perfect machines, best material  
and workmanship. Prices reasonable.  
Send 4c. for large ill. catalogue, tes-  
timonials, etc. High Class Poultry  
& Eggs. Full stock Poultry Supplies.  
Peerless Incubator & Brooder Co., Quincy, Ill.



**Need of a New Railroad.**

Letter in the San Jose Mercury.

There are some reasons why we should build a road to connect with the Santa Fe railroad system for eastern shipment of Santa Clara valley fruits: up to October 27, 1894, northern central California shipped, according to official reports of the Earl Fruit Company, 6235 cars of fresh fruit at a cost of an average of \$500 per car for refrigerator and ventilated cars. Refrigerator and icing cars cost \$525 to \$600; ventilated cars, \$400 to \$450 per car. The total freight charges on five shipments equaled \$3,117,500. Santa Clara county shipped about a thousand carloads of the above, and fruit growers paid as their share \$50,000 in freight on the one item of ten fruit shipments alone. With a competing road the rates per carload New York would not be over \$250 per car. This would have given the fruit growers and shippers a quarter of a million dollars more than they did receive for the green fruit crop of 1894. The canned and dried fruit shipments of the same period in 1894 will approximate 3000 carloads. This class of goods was shipped at about one-third of above rates, thanks to the competition of the steamship line put on by San Francisco merchants, Leeds and others. With the foregoing startling facts, and the depressed and despondent feeling caused by the disastrous results of the past season's shipments of green fruits, shall we on bended knees in mercy of the despot on the throne, "Give us enough for our daily bread?" God forbid that we, in whose veins courses the blood of Revolutionary heroes and patriots of old, should become slaves of this Mammon's despot. Let us be men and throw off this incubus. Stand up, and, shoulder to shoulder, move with might and main to break monopoly's chains.

**The Mesquite Tree and Its Uses.**

It is well known to those familiar with this tree, it is useful in many ways to the people of Mexico and the southern part of the United States. Its roots and wood are excellent for fuel; the gum is used for dyeing, and also as medicine; the leaves and pods, or beans, as they are usually called, are valuable forage for stock, and are also used by Mexicans and Indians as food. The "beans" consist of an outer husk, pod, and of hard kernels. The pods are agreeable to the taste and very nutritious. Their food value largely depends upon the sugar contained, as high as twenty four per cent having been found in them. The kernels are exceedingly hard and are not digestible by animals when swallowed. Analyses, however, show them to be very nutritious, and if a way could be found to utilize them the value of the "beans" for stock would be much increased. Weak beer is also made by fermenting the meal made from the pods, but it is obtainable only in small quantity. The flowers of the mesquite yield an excellent honey, and in this way the tree is of commercial importance to the keepers of the regions where it grows. These many uses make it desirable to avoid needless destruction of this tree, although it is a slow grower, it would probably in the long run be of advantage to plant it, since it is especially adapted to arid surroundings and will thrive in situations where most trees perish. This tree and its products are undergoing careful examination at the hands of Professor Forbes, Chemist of the Agricultural Experiment Station at the University of Arizona. A bulletin on the subject will soon be issued.

There is no use of walking the floor like a felon," says a gentleman who had some experience in that direction. "Wrap a cloth loosely around the felon, leaving the end open. Pour powder in the end and shake it gently until the felon is covered, then wet it with camphor. In two days the pain will be relieved, and a perfect cure will be sure to follow."

**A Woman's Nerves.**

**THE STORY OF A WOMAN TO WHOM NOISE WAS A TORTURE.**

Prostrated by the Least Excitement—Physicians Baffled by her Case—Had Given Up in Despair When Relief Was Found.

(From the Gate City, Keokuk, Iowa.)

Mrs. Helen Meyers, whose home is at 3515 Vernon Avenue, Chicago, and whose visit to Keokuk will long be remembered, was at one time afflicted with a nervous malady which at times drove her nearly to distraction. "Those terrible headaches are a thing of the past," said she the other day to a Gate City representative, in the presence of a number of friends. "And," continued Mrs. Meyers, "there is quite a story in connection with it too, indeed I consider it one of the most miraculous cures of modern times.

"My nervous system sustained a great shock some fifteen years ago, brought on, I believe, through too much worrying over family matters and then allowing my love for my books to get the better of my discretion where my health was concerned. Why, whenever my affairs at home did not go along just as I expected, I would invariably become prostrated from the excitement and I would consider myself fortunate indeed if the effects of the attack would not remain for a week. I was obliged to give up our pleasant home not far from the Lake Shore drive, because I could not stand the noise in that locality. I could find no place in the city which I deemed suitable to one whose nervous system was always on the point of explosion. To add to my misfortunes, my complexion underwent a change and I looked so yellow and sallow that I was ashamed to venture from the house at all.

"'Madam,' said my doctor to me soon after an unusually severe attack of the malady, 'unless you leave the city and seek some place of quiet, you will never recover.' So I concluded I would visit my uncle, who lives in Dallas county, Iowa, and whose farm would surely be a good place for one in my pitiable condition.

"Now for the strangest and most miraculous part of the story," continued Mrs. Meyers, who had aroused the curiosity of her listeners. "My uncle used to live here in Keokuk, you know, and when he moved to his Dallas County farm, he of course ordered the Gate City sent to his address. I picked up the paper one day and happened to come across an interesting recital of the recovery of some woman in New York State who was afflicted as I had been. This woman had been cured by Dr. Williams' Pink Pills for Pale People. I thought that if Pink Pills cured that woman they might do the same for me. I began to take the pills according to directions and I began to feel better from the start. My uncle told me two weeks after I commenced taking Pink Pills that he guessed he would not be afraid to discharge his old army musket now without warning me beforehand, for he didn't think it would affect me at all. I took several boxes of the Pink Pills and then I was ready to go back to Chicago. My nervousness was gone and my complexion was as fresh as that of any sixteen-year-old girl in Iowa, and Pink Pills is what put the color in my cheeks. No wonder I am in such high spirits and feel like a prize fighter. And no wonder I like to come to Keokuk, for if it had not been for Pink Pills bought from a Keokuk firm, I would not have been alive now," laughingly concluded the lady.

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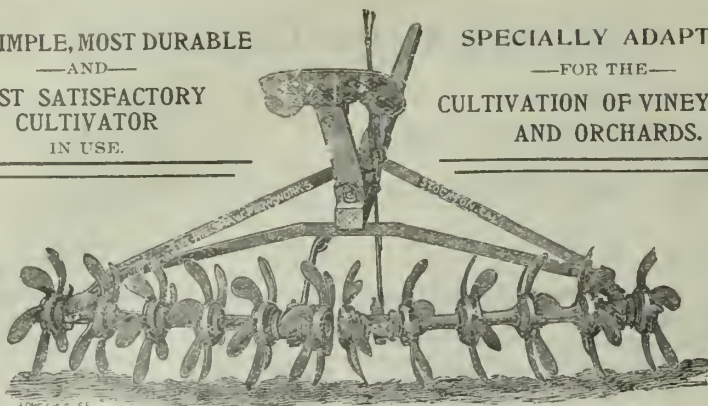
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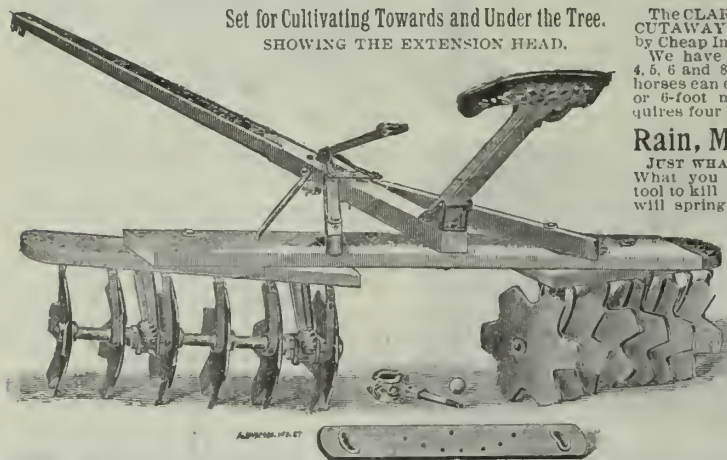
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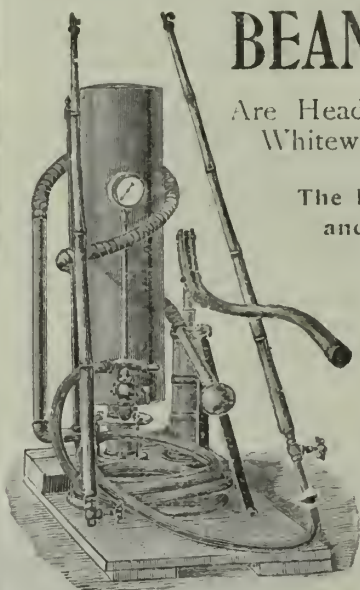
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Nozzles arranged to spray at any angle ordered.

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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 12.

SAN FRANCISCO, SATURDAY, MARCH 23, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

### The Transition Period in California.

One of the most interesting periods in California history is that which dates from the first coming of

prise may yet restore the old buildings properly. A painted savage with a silk hat on his poll is no worse an anachronism than is the restored Mission with a shingle roof and sawed cornice.



APPROACH TO THE ALVARADO RESIDENCE.

Americans to the final American occupation. It is not an important period because California, though it had nearly a century of records before the eventful days of the '40s, was about as nearly unoccupied as any desirable region of the earth's surface could be. The population away from the Missions was very small and the traces of civilization exceedingly faint. There was then very little upon which the new era could leave the impress of change, except as it planted cities and great productive enterprises upon wide areas upon which the native flora and fauna disported themselves without let or hindrance. Regions to the southeast of us, which are much later in awakening to modern progress, had an important ancient civilization which left discernible marks of its greatness, while California was known only to clam and acorn-eating Indians of the lowest grade. There came of course in the wake of the missionary expeditions and settlements a certain contingent of lay settlers, who made habitations and established pastoral industries, but their occupied areas were hardly sufficient to well accentuate the desolation and vacancy of the region as a whole. Such being the case, the transition period, which modified manifestations of the older occupation, left no traces of any importance or dignity. The nearest approach to such character is of course to be seen in the restored Mission buildings, where shingles have replaced the tiles of the padres. It was evidently too much labor to burn new tiles and to erect strong rafters to support their weight, and so the skeleton frame and the frivolous shingle were invoked to keep the sun and rain from walls constructed to support a more picturesque and enduring covering. There is some reason to hope that some day some of the old Mission buildings which are now doing penance under shingle roofs may be truly restored in a style in harmony with their original design. Antique tiles are now being pressed out in considerable quantities at the south to enable modern owners to build as the Mission fathers did a century ago, and some enter-

Though there is nothing of any great importance in this transition from old to new, outside of the Missions, there are some rather interesting additions of modern styles to old-time designs. The central engraving on this page, which shows the hacienda of the Castro family on the east side of the Bay of San Francisco, is one of the most ambitious commingling of styles and materials which can be cited. Here the solid adobe walls are capped by a shingled roof allowed to overhang far enough to cover a veranda which is itself twin-storied like a summer hotel, with ornamental carpentry above and solid blinds below strong enough to stand a siege. Such a building is sometimes alluded to as an old Spanish

which encompasses it. We cannot interpret the omen.

Some of the old houses of the settlers of Spanish descent were as stark and rude as the one to which we have just alluded. The dwellers seem not to have had enterprise enough to plant a tree nor to build near one which had grown naturally, though there might be many such in the region. For the same reason, perhaps, though the missions had many fruits, the ranch dwelling had none. Stark and bare, bleaching in the sun, and beaten by the rain, devoid of orchard or garden except, possibly, a patch of peppers and garlic, the ordinary dwelling of the Spanish or Mexican population was a fit progenitor of the house on grain or stock farm, which in too many cases survives to the present day as a home place for young Americans. But there were notable exceptions. Some of the old places in southern California were picturesque in their design and surroundings and full of comfort and cheer to the resident and the guest. Such places were also found here and there in the upper part of the State. Such a one was the Alvarado residence. The upper picture on this page shows its grape-clad pergola through

which lay approach to the house. Contrast this with the habitation at the bottom of the page and you get the two extremes of the middle period.

SOME mistakes may be corrected or overcome; but planting an orchard of poor trees on unsuitable land is not one of them. It is far better to plant one of the right kind in the right place and then give it proper care than to plant 100 sickly trees on poor land, to be neglected later on. A writer truly states that tree planters must avail themselves of the helps of times, such as horticultural reading and the experience of others; they must take the time to not only experiment but to look up the conditions of success and of failure in their respective neighborhoods.

ONE of the largest wool trans



HOME OF THE CASTRO FAMILY.

residence, which it is not in any sense, but rather a sort of crossbred or hybrid structure which may be very comfortable as a residence, but is an abject failure as a "historic remain." It is simply a grotesque mixture—a sort of lapping over zone, if you please, between the first and second halves of the present century.

Another significant indication of transition-period building, though of course of less dignity, is the lowest picture on this page. Hear a lean-to of boards and battens has grown out of the adobe of the main structure, and the tiles of the old period pour their water over like a benediction upon the shingles of the new period in the most charming spirit of cordiality. A poet could perhaps find some deep significance in this and in the split picket fence



THE OLD AND THE NEW IN CALIFORNIA BUILDING.

actions that have ever taken place in this State has been consummated in Bakersfield, Kern county, in which the firm of Ardizzi & Olcese sold seven thousand sacks of wool to Platshek & Harris, of San Francisco, for \$175,000.



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ALFRED HOLMAN.....Editor.  
E. J. WICKSON.....Special Contributor.

San Francisco, March 23, 1895.

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## The Week.

### Frost and Fruits.

There were several sharp morning frosts in most of our fruit growing valleys in the northern and central parts of the State last week and quite alarming reports of damage were at first circulated. These reports have been considerably modified after later observation, and the present indications are that no very heavy or general injury has been done. In the earlier districts where almonds and apricots had gone out of bloom, and the young fruit was "setting," there has been no doubt considerable injury, especially to the fruit on the younger orchards. The general impression seems to be that apricots will bear lightly this year as a rule. Very early localities, which profit most from the earliest shipments, will in all probability have less weights of fruit than usual, but whether they will get any less money is still a question.

### Argentine Wheat.

We are indebted to Albert Montpellier, manager of the Grangers' Bank, for a late copy of *The Review of the River Plate*, published at Buenos Ayres, which indicates that Argentina will have less wheat to ship this year than usual. It says that the deficiency in this season's wheat crop becomes more serious, and it is doubtful if they will export over one million tons—the highest estimate is 1,200,000 tons and the lowest 800,000 tons. The quality of fair average wheat is satisfactory, but there is still an uncertainty of how much "chuso" (inferior grain) wheat will have to be set aside. The Argentine wheat farmers are holding out for high prices "in view of a shortage in the world's crop by the falling off in supplies from here, but they will have to sell freely very soon for want of cash." The Argentine people seem to be conscious of their importance as a factor in the world's wheat supply. We hope they are right in thinking that their deficiency will set up the world's values, but recently the world has seemed to have so much wheat that one or two supply countries might drop out of sight without influencing values much.

### Flower Shows.

We alluded last week to the Santa Barbara flower carnival. It is now announced that preparations are being made for the second annual rose carnival which is to take place in Santa Rosa during the last week in April or the first week in May. The carnival will last three days, and promises to greatly eclipse the big carnival had there last year. Big prizes are to be given for the best decorated turnouts and for the best display by outside towns. The California State Floral Society has issued the premium list for its Eleventh Semi-Annual Exhibition and Rose Show, to be held early in May at a day and place yet to be announced. Cash prizes are to be awarded. This spring's show will be managed by Prof. Emory E. Smith, the secretary of the Society, and the other members of the committee are as follows: Mrs. Austin Sperry, 2100 Pacific Avenue.

S. F.; Mrs. Helen A. A. Cross, 718 Waller St., S. F.; Mrs. Amos Mearney, Alameda; Mrs. Orville D. Baldwin, 3700 Washington St., S. F. The last named lady is secretary of the committee and will send blanks for space applications, lists, rules, etc. The show invites both professional and amateur exhibitors and promises to be one of the best of the series of this well-known society.

### Sugar Cane.

There arrived this week a shipment of several varieties of sugar cane from Mr. Spreckels' plantations on the Islands for planting on the Government experiment station plot on Union island, San Joaquin county. As stated in the RURAL last fall, the first season's growth of the Louisiana cane on the tule land was very satisfactory. It has wintered well; that which was allowed to stand protected only by the leaves of its own ratoon went through the winter as well, apparently, as that which was cut and the stubble carefully covered. The importation of a collection of varieties from the islands is to secure different sorts so that test may be made of their comparative growth and hardiness in California. Mr. Spreckels has collected varieties from the different sugar regions of the world, and his effort is thus made to serve the present inquiry in California. Another plantation of cane has been made this month near Stockton by Dr. L. E. Cross, who owns land on the Sargent tract northerly from the city. This year's experience ought to tell something significant about sugar cane in the tule region.

### Dairy Commission.

Governor Budd seems to be having trouble to fill the Commission with just the right sort of practical dairymen. Report first announced that he had decided upon Messrs. G. W. Burbank of Tamales, Frederick Hewlett of San Francisco and Mr. Flint of San Benito county. Mr. Hewlett is a dairy merchant and not a practical dairyman, and it is now reported that Louis Tomasini, who is a dairyman as well as leader in the Dairymen's Union of this city, has been chosen in Mr. Hewlett's place. The law requires the commissioners to organize for business within twenty days of their appointment, so we shall probably soon have the enterprise under way.

### State Board of Trade.

The annual meeting of the State Board of Trade was held on Tuesday. The secretary reported twenty-three counties in affiliation. Annual reports from officers showed that the total number of carloads shipped from northern California during the year 1894 of green deciduous fruits, dried fruits, raisins, nuts, citrus fruits and vegetables was 27,099 cars; from southern California, 10,527 cars; total by rail, 34,626 cars, and by sea the equivalent of 1334 cars. The average increase of shipments of all classes for 1894 over 1893, 164 per cent. General N. P. Chipman was elected president of the Board for the ensuing year, and J. A. Filcher general manager and secretary.

### Grass Expert.

Mr. J. B. Oleott of Manchester, Connecticut, who is the great grass pilgrim and prophet of the country, is now in this State. He has on his farm the greatest grass culture station in the world. He believes that the study of grasses is the most important proposition which can now engage the scientific and industrial mind. He has made pilgrimages to all parts of this country and Europe seeking grasses in their native haunts, and he believes grass gardens should be maintained in all climates and that all people should be taught turf making upon correct principles. Mr. Oleott was on the grounds of the University at Berkeley on Tuesday and speaks highly of what he saw there, but believes that the work should be greatly extended. Mr. Oleott has accepted an invitation to address the State Horticultural Society at its meeting in this city on March 29th. He has grass doctrines which he thinks fruit growers should understand.

### Farmers' Institutes.

The next few days will be very actively engaged in Farmers' Institute lines. Sacramento Pomona Grange will hold a joint installation and Farmers' Institute on March 30th. During next week Prof. Hilgard will be busy in southern California. He will address the Horticultural Club at Claremont, Los Angeles county, on Monday afternoon. On Tuesday and Wednesday will be at Perris, and Thursday and Friday at Riverside. Prof. A. J. Cook, who is also in this work for the State University, will be with Prof. Hilgard at the south. The following week it is expected that institutes will be held in Kern and Tulare counties. The Bakersfield meeting may be held April 1th, though we are not informed that the meeting has been fully arranged for. However this may be, Tulare will have two meetings on Friday and Saturday, April 5th and 6th, and very careful arrangements have been made for it and many local attractions secured. Prof. Wickson and Mr. Shinn will take part in the Tulare meeting. Interest in Farmers' Institutes seems to be rapidly extending, and it is well to use the time fully before the busy season in crop work opens.

## From an Independent Standpoint.

It was hardly to be expected that serious inquiry would be had in the matter of the charge made by State Senator Biggy against State Senator Dunn; and it is not far to look for the reason why. Dunn was one of a gang whose guilt as takers of bribes involved the guilt of the givers of bribes. Therefore there stood massed against a real investigation a controlling number in both branches of the Legislature and all the "interests" (including the corporations) which have supported corruption and made it serve their purposes. In other words, the attempt to expose the crimes of the session was opposed by all who had given or received or handled any of the "pork." A combination strong enough to control the legislative body in all its acts was not likely to fail when it came to shielding its own members. Nobody expected the inquiry to be anything better than a farce; and such it turned out to be. First, it was formally resolved by the committee to decline all evidence tending to show the existence of a combination of bribe-takers, and to limit the investigation to the bare question of whether or not Senator Dunn attempted to bribe Senator Biggy. Upon this basis Senator Biggy, under oath, solemnly declared yes, and Senator Dunn likewise under oath as solemnly declared no. No other testimony was admitted, so it settled down to a mere question of veracity between the two Senators; and the committee reported the fact without prejudice. This proceeding, while nominally amounting to nothing, nevertheless has convinced the public that Mr. Biggy spoke only half the truth. It has shown clearly enough that both the Legislature and the lobby are afraid of investigation.

Just as California is in humiliation over the shames of its legislative session come reports from other States exposing conditions equally discreditable. In the adjoining State of Oregon, which enjoys an exceptional character for public morality, the Legislature just adjourned failed in nearly all its legitimate duties, but contrived to appropriate something like eight hundred thousand dollars in excess of the last previous appropriation for the ordinary expenses of State government; this, too, in spite of the fact that it was elected at a time of universal poverty and upon a promise of economic reform. Under these circumstances, we can well understand the disgust which leads the *Portland Oregonian* to say:

The State nightmare has passed away. The occupation of the bandits, pirates and highwaymen who have held up the Legislature forty days is gone. Such a gang never can, by any possibility, be assembled again. There is relief in the fact that the Devil can but seldom do his dirty best, and after he makes a supreme effort he must always have a rest.

This may be a little intemperate, but it must be allowed that the provocation is strong. From Indiana there comes a report of doings even worse than what we have seen in this State and in Oregon. On the night of the 11th inst. the Legislature broke up in a riot in which one man was shot and many others beaten. The Governor's private secretary, in trying to make his way to the speaker's desk with an executive message, had his clothes torn from his body and was knocked about until the blood streamed from a dozen wounds. From other States there are reports which, if less atrocious than this, are still shameful enough to illustrate how the passions of avarice or partisanship may make men—even when charged with high responsibilities—forget every restraint of duty and self-respect.

All this does not prove that the people of the United States are less moral or less self-controlled than formerly; but it does prove that they are less regardful of their public responsibilities. It shows that want of vigilance in political affairs is a growing vice with us. Look into the methods by which legislators are selected in the several States, and it will be seen that practically the choice is no longer with the people; that it is in fact with the powers of political corruption. How do we go about it in California? In the city we leave it to be done by Crimmins and Kelly, Chris Buckley, Dan Burns, or whoever else happens to be the dominant party boss. Thus it is that Senator Dunn, a man well known to the criminal courts, is in the sixth year of his legislative career. In the country the selections are, in many cases, made by agents of the corporations. In



almost every case the candidate is required to give pledges as to his course towards certain subjects; and invariably he is assessed in a comparatively large amount for campaign expenses. In a large number of instances the local managers, who represent the city boss, the liquor interest, or the railroad company, pay this assessment and thus bind the candidate to a course of complaisance in his capacity as legislator. The effect of this system, generally speaking, is to bar out self-respecting men from the list of legislative representatives. Of course, men of independent character will not submit to conditions which make them mere puppets; and so the greater number of those who appear at Sacramento are weakly or mercenary creatures, selected for their very infirmities of character. Under the circumstances the only matter for surprise is that occasionally an honest and capable man is found at Sacramento. However such sturdy integrity as that of Senator Biggy has managed to live through the conditions under which he was nominated and elected and through which he has served in the Legislature, it is hard to imagine. And it is hardly less surprising that now and again men like Waymire and McAlister find their way to Sacramento. The fact that in every Legislature a few such are to be found serves at least to keep alive the traditions of capacity and integrity and devotion to public duties, which in theory lie at the basis of the American system. That clean and capable men are sometimes elected proves that the thing can be done; and it gives courage to wait for such a stirring of the public conscience as will destroy the present system. That it will come we cannot doubt—but it seems a long time to wait.

While in one sense the Biggy exposure came to nothing, it still served a good purpose in alarming the booblers and in breaking up their organization. Just prior to Biggy's declaration against Dunn on the floor of the Senate, a railroad measure called the "Anti-Scalper's bill," had been put through "under pressure" by the votes of the boodle combine. On top of this came another railroad bill to repeal the act which makes it unlawful for a street-car company to charge more than one fare for one continuous trip. Concerning this proposition there could be no misunderstanding; it was a job in the interest of the San Francisco street-car combine. It was not supported by any consideration of public advantage; and yet it had been passed by the House and in the Senate was advanced by a solid vote through the stages preliminary to final action upon it as a measure of "special urgency." It was at this point that Biggy spoke out; and on the ballot which instantly followed eight of the booblers fell off in a panic, recording their votes in direct opposition to their former position. Of course, this sealed the fate of the street-car job.

But there was another effect of the Biggy exposure vastly more important in connection with the proposition to grant the Valley Railroad depot privileges on the San Francisco water front. Mr. Spreckels and his associates want for depot purposes a tract on the southern water front of the city known as "China Basin." Under the conditions which effect the ownership of all the city front, this tract belongs to the State and is under the administration of the Harbor Commissioners. Mr. Spreckels' proposition is to take "China Basin," which is nothing better than a pestilential swamp put to no use whatever, fill it in and cover it with railroad yards, depot buildings, warehouses, etc., for the use of the Valley Road. The concession asked is a lease for fifty years at a nominal rental. A bill giving the Harbor Commission authority to make such lease was introduced at Sacramento just before the Biggy exposure; and it looked like a doubtful fight. The railroad forces had rallied in opposition, and it appeared entirely probable that the power which had passed the "Anti-Scalper's" bill and which was rapidly advancing the "street-car job" would succeed as well in fencing railroad competition out of San Francisco. But just at the decisive hour came the Biggy exposure. The booblers were frightened to cover and the bill authorizing the lease went through with a whoop. It is not as carefully guarded a measure as we could wish, but it has this great merit, that it will allow the new road to compete with the Southern Pacific on equal terms at San Francisco.

### Major Weinstock on the Stubbs' Letter.

At Sacramento last week a reporter of the *Bea* asked Major Weinstock (chairman of the fruit-growers' committee which recently addressed the S. P. R. R. Co. on the subject of rates) what he thought about Mr. Stubbs' letter. Major Weinstock answered:

In answer to your question I can only say that I regret the Southern Pacific Company does not see its way clear at this time to grant all the concessions asked for by the growers. I note that Mr. Stubbs says that the Southern Pacific Company cannot reduce the rate on ventilated cars with an eight-day service from Sacramento to Chicago, and that they cannot grant the request that ten tons be made the minimum amount of cherries to be loaded in refrigerator cars; nor the request that mixed cars of dried and canned fruits be carried with each variety paying its own rate, instead of the highest rated article making the rate for the entire car; nor the request asking for an emergency rate of seventy-five cents on the raisin crop of 1895.

I am very pleased to note, however, that it is the intention of the Southern Pacific Company, while not ready to absolutely guarantee a five-day service to Chicago for ventilated cars in a manner to hold itself liable for damages in case of failure to make the time, to undertake negotiations with their connections and strive to make the five-day schedule reasonably certain. I am also pleased to notice that the Southern Pacific Company, appreciating that the charges for refrigeration have been too high, propose to do all that is possible to secure for the growers a reasonable reduction in these charges from the refrigerator companies. And I am further pleased to find that the company intends to review the present local freight rates on fruit, with a view to seeing if they can be modified in favor of the shipper.

If the Southern Pacific Company can secure for the grower, say a \$50 reduction per car on refrigerator charges, will make reasonable reductions on its local charges, and will, further, obtain a five-day service for ventilated cars to Chicago that can be depended upon, they will have done that which will be a substantial gain to the fruit-growers, and the results must be of great benefit to shippers, growers, as well as to carriers. I regret that I cannot agree with the statement of Mr. Stubbs that it was unwise on the part of the growers to publish to the world existing conditions. Mr. Stubbs, in his letter, in substance says:

Is it not certain that the Eastern farmer will dismiss all thoughts of removing to California when he reads the committee's report that a crisis has been reached which threatens the future welfare of the State, the fruit-growers and the carriers, and that the fruit industry is in a deplorable condition? Will he not picture the vast army of fruit-growers in this State on the verge of financial ruin?

While I believe Mr. Stubbs is right, and that it is quite probable that these statements will deter the Eastern farmer from coming to California, yet I believe it is in the interest of all concerned, until conditions change and the industry becomes more profitable, that it should deter him from coming.

Much as we desire to see our State increase in population; much as we desire to invite to our midst the brain and the brawn, the wealth and the muscle of those living elsewhere; much as we desire to share with others the manifold blessings of soil and climate which a generous Providence has showered upon this great commonwealth—we do not desire to bring these things about by misrepresentation, either stated or implied. If our industries are languishing; if our producers are unable to earn a living; if great numbers of our growers are brought to the verge of bankruptcy by causes which, though grave and serious, are yet removable—we do not think it in their interest nor in the ultimate interest of the State to invite the innocent to come and share adversity and probable ruin.

We believe it best for ourselves, best for the State, and best for prospective settlers that the truth shall be known, however unpalatable that truth may be. If the truth honestly stated means a temporary stoppage of immigration to our State, it will also mean the rousing of all the latent energies of producers and carriers to remove the causes for existing unfortunate conditions so that we may soon again be able to truthfully invite others to come and share our prosperity, instead of our adversity.

I am not prepared to say what action the committee will take in response to Mr. Stubbs' letter. A copy has been sent to each member of the committee, and I shall await their wishes in the matter.

### Wheat Growing in Argentina.

#### How Immense Crops Are Raised at Small Expense.

Exeter (N. H.) *Newsletter*.

By the courtesy of Wm. H. Marston, Esq., of New York, who needs no introduction to our readers, we are enabled to print below portions of a letter he has just received from Buenos Ayres on the wheat resources of Argentina. The letter also gives interesting information of its writer, Don Jorge O. Wiggins, formerly of this section and an attendant of the high school in Exeter, in which town he found his bride.

"Wheat growing in this country is on the increase to an almost incredible amount. Every year new men come from Italy, Switzerland, Germany and Spain, and engage in it, after having worked a year or so as laborers to learn the customs and manners of the country and soil. And think for a moment of the immense advantages these people have over the American farmer. They hire absolutely no help except at the harvest time, but instead grandmothers, mothers and children are to be seen working in the fields, doing all the work from plowing to harvest time.

"Now for statistics. The total amount of our last crop, i. e., harvested at the beginning of 1894, was 1,700,000 metric tons of 1000 kilogrammes, 2200 pounds, more or less; amount left over from previous crop, practically nil; amount consumed here, estimated at 500,000 tons, including about 60,000 tons exported as flour. This last item is also rapidly on the increase. Wheat exported from January 1st to June 30th last, 1,029,546 tons. As to possible export between June 30th and January 1, 1895, it is calculated that there still remains a surplus in the country of from 150,000 to 180,000 tons, but perhaps fifty per cent is of inferior quality and not up to export requirements.

"The most reliable estimate of the next crop is perhaps a little under the mark, 2,000,000 tons. It is generally estimated that there is twenty per cent over last year, but as last year's crop was unusually favorable in all the provinces except Santa Fe, perhaps the percentage may be a little too large. Still, up to the present the crops are almost universally in fine condition. The drouth in the northern provinces has been broken by copious rains and up to the present the locusts have done little or no damage. The time of sowing is during May, June and July, and we are liable to frosts here till the end of September, down south even later.

"About myself, I am an engineer and surveyor, holding a provincial (Santa Fe) diploma in the latter branch, which is here rather the higher, as it requires a stiff examination to obtain the rank. I go all over the country, wherever I find

work to do, my unfortunate luck usually sending me to the extreme north in the summer, where the heat ranges from 114 in the shade upward, and to the far south in the winter. In my profession we lead rather a monotonous life, as our work is always more or less the same. Yet once in a while a taste of Indians, horse thieves, or perhaps a jaguar serves unpleasantly as that piquant sauce called variety."

### The European Market.

Mr. W. H. Wright's Observations Beyond the Atlantic.

Mr. W. H. Wright, the well-known fruit packer of San Jose, returned last week from a four-months trip to Europe. It was a business trip, Mr. Wright's purpose being to ascertain the state of the Eastern market as regards California canned and dried fruits and also to establish direct agencies for the sale of the products in Europe. Speaking of his trip to a reporter of the *Mercury*, Mr. Wright said:

In the East I found that the effect of the business depression is still being felt in the fruit market, as well as in other lines. The greatest hindrance to anything like an advance or firmness in prices, however, was when Congress was in session and there was a prevailing uncertainty and uneasiness as to what was going to be done with the tariff.

After the adjournment things have been growing more and more settled, and the prospects for California fruit, as regards a large consumption there at good prices, are brightening.

In the principal cities of Europe, I found that there was little or no knowledge, even among the most extensive dealers in fruits, regarding the California dried product. A few apricots have reached the market, but Santa Clara county dried fruit—peaches, pears and apples—are almost an unknown quantity. In Spain and Portugal, where apricots are raised, and whence they originally came, little of that fruit is dried. It is put up for consumption in glassware and tin. Some dried apricots have reached the European market from Africa, but the fruit was greatly inferior to the California product, as was agreed by all to whom I displayed my samples.

As I intimated before, I found few fruit dealers in Europe who could handle the California dried fruit intelligently. I, however, was fortunate in securing first-class agents in London, Edinburgh, Dublin, Paris, Hamburg and Bremen. I did not visit Russia on account of the extreme cold weather to the north, but through the London house I established an agency at St. Petersburg.

In my travels I visited Rome, but I found that the present situation in Italy makes it almost entirely hopeless to expect to reach that market with the dried fruits of this State. The people there raise a great deal of fruit, and it is obtainable at remarkably low prices. The masses are too poor to pay any kind of prices for imported food products of any kind.

As far as prunes are concerned, the French control the market of Europe, and, as is well known, they have also managed to get a good foothold in the East in this country. Large quantities of other kinds of fruits can undoubtedly, however, be sold in European cities if the goods can be placed in the market there at low enough prices to make them accessible to the masses of the people. The trouble has been that heretofore the fruit has gone through too many hands and too many large commissions were charged upon it before it reached the dealer in England or the continent.

Besides establishing the direct agencies, I made arrangements for direct shipping rates by rail and sail to the various European points. To insure against damage by the sea voyage, the dried fruit will be shipped principally in a new package, consisting of barrels lined with tin.

The fruit dealers of Europe seemed very favorably impressed with the California product, especially the peaches, pears and apricots. On account of the tariff, it is impossible to get the fruit of this State that is put up in glassware or tin into the markets across the ocean. The object of this tariff is to protect the large amount of sugar that is used in preserving fruit in those countries. Only extra quality preserved fruits that are sold to the fancy trade in glassware and tin goods can at present be disposed of in any quantity in the markets of Europe.

### Gleanings.

THE *Dixon Tribune* announces that 800 acres of the Wolf-skill tract near Winters are about to be divided into thirty-acre tracts.

KEEN *Echo*: The Sheep Shearers' Union has proved to be a success. The men have all gone to work at union wages and then there are not enough to supply the demand, consequently the president has sent to outside counties for more men. The difference in wages will not amount to a great deal to the sheep men but it will count up considerably to the shearer.

COL. Aiken writes from Wrights' station, 18th inst.: "The Santa Cruz mountains fruit crop not damaged by late frost. The coldest morning was 39°. Trees not blossomed; buds swelling but not showing very much color as yet. Judging from healthy and vigorous condition of trees and buds, I am of the opinion that there will be a large crop of fruit here, especially prunes."

OROVILLE *Register*: Mrs. Heckart, near Pentz, has an orange tree which she planted twenty-nine years ago. The tree was then two years old, and was presented to Mrs. Heckart by a friend who had grown the tree from the seed of a Central American orange. It is claimed that this orange seedling, which has borne fruit for many years and is healthy and thrifty now, is next in age to the Bidwell Bar patriarch orange tree.

OROVILLE *Register*: Do you know that butter is almost the only product that has held its own in price during the last quarter of a century? Your pound of butter will now buy twice as much flour and three times as much sugar and a good deal more rice than it would a quarter of a century ago. There is nothing that pays better than dairying, if skill and judgment are used in selecting cows that will bring the owner good profit.

STOCKTON *Mail*: W. R. Hutchinson, who lives on the upper division of Union Island, thinks he has found a new method of killing ground squirrels. His plan is to starve them out, and he does it in this way: He gets a quantity of newspapers and stops up every hole he can find about his place. When the little burrowers come up and scratch at the entrance to their holes to get out, the rustling of the paper frightens them and they return underground.

COLUSA *Sun*: The hog is becoming an important question in Colusa. Farmers are going to raise the useful animals, and they are procuring the best varieties. More and more attention



is being planted and hog raising is increasing. It will be a source of wealth to the country. Anything that feeds the home locality brings money to that locality. Chickens, eggs and butter will keep more money at home than one would think. These, added to the hog, promise much for Colusa county.

**CLOVERDALE** letter March 14th: Orange interests at this place are assuming large proportions. Many trees are being put out. To-day the articles of incorporation of the Cloverdale Orange Company were signed. William T. Brush, S. Pischow, W. P. Ink, E. F. Woodward and G. B. Baer were elected directors. A large orange and lemon grove will be planted at once, with extensive improvements to follow. The main purpose of the company is to advance citrus culture in this district.

**SONOMA** *Index-Tribune*: Apricots will be almost a total failure in Sonoma valley this season. The trees commenced to blossom a week or two ago and gave promise of a good crop, but for some unknown cause they set in to bleeding and the blossoms dried up and fell off. The Bartlett pear crop will be short, and it is the opinion of the owner of one of the finest pear orchards in this section that there will be only half a crop. Peaches and prunes promise well and there will be a good crop of each.

**Pajaronian**: The Pajaro valley hen is busy, and loads of eggs are shipped from Watsonville each week. Prices are extremely low, but the hens are not discouraged, and are doing their best to supply the home and Eastern demand. A close write up of all the industries of the Pajaro valley would disclose that the barnyard fowl brought many thousands of dollars annually to this section. Each case of eggs will net the shipper not less than \$3 at present low prices, and about sixty cases are shipped daily.

**ANAHEIM** *Gazette*: The price of seedling oranges has been reduced 10 cents a box, making the rate \$1.50 for the fancy grades. The reason of this is the unprecedented call for navels from the East and the recent importation of some 300,000 boxes of foreign oranges. The Florida freeze has served to bring our navel oranges prominently before Eastern buyers, and many who never saw a navel before are now satisfied with nothing else. Once the navels are introduced, the other oranges seem to be nowhere. This has resulted in extraordinary shipments of this grade of fruit, and seedlings have been neglected.

UPWARD of a thousand ear-loads of fruit have been shipped out of the Pajaro valley during the past season. The *Pajaronian* says: There is no interregnum in the fruit-shipping year in Pajaro valley. The calendar year opens when apple shipments to Eastern points are being actively pushed, and before all the apples are out of the packing houses small fruit shipments have commenced; and in a brief season berries are supplemented by stone fruits, and then again comes shipments of the king of Pajaro fruits—the apple. \* \* \* Yellow Belflowers, Newton Pippins, white and red Winter Pear-mains, Missouri Pippins, Romanites and Smith's Cider are the principal varieties handled for Eastern shipment, the three first named varieties being far in the lead.

**PORTERVILLE** letter (March 13th) in *Tulare Register*: The most cheerful news this morning is that it is raining gently but persistently, in just the right way to do the most good. Already there are thousands of acres of the most luxuriant feed, knee high to an ordinary man, with no stock to eat it, as the sheep have been sold off as well as the cattle and horses. Last year it was stock and short feed, but this year it is feed and no stock. There will be less wool shipped from this point the present spring than ever, since sheep-raising became an important industry; and it will be noticed that, as heretofore, a big amount of money came in at the time when it was scarce with farmers and fruit raisers. Never mind, Congress has gone home and we will try to bear up under these minor drawbacks.

**VACAVILLE** *Reporter*: Many fruit-raisers of Butte county have rented their orchards to Chinese, some of them for a term of years. This is a grave and serious mistake, and all fruit-growers who know how to properly care for an orchard will soon discover it. The Chinese, as a rule, will pay a higher rental than a white man, but the difference in properly caring for a fruit ranch will be worth more to the owner than the extra amount received. The experience of the fruit-raisers here is that a ranch rented to Chinese will deteriorate in value each year, as the Mongolian will never try to improve for the future, but simply to get the greatest value for the least labor. If Butte county fruit-raisers have any regard for their orchards and their community they will be a little more careful in the future, else they will have neither.

**SAN BERNARDINO** *Times-Index*: John H. Gay Jr., who has recently studied the olive question from the standpoint of the olive orchards of various European countries, writes as follows: "Everywhere you go in the European olive districts they set before you the most delicious olives I have ever eaten. You find them in the peasant's hut as well as on the rich man's table—all delicious. These olives keep perfectly for two or more years without perceptible deterioration. There is no secret process in curing them. The natives place the fruit in baskets, resembling large champagne baskets. These baskets are placed in the running waters of a mountain stream, remaining there thirty or forty days. This simple treatment removes the acidity and bitterness from the olive with a thoroughness not equaled by any other treatment."

**OROVILLE** *Register*: To insure success in fruit growing don't plant over ten acres. The man who sets out a big orchard always runs in debt ere his trees come into bearing, and then has a hard struggle for years ere his orchard is paid for. The man who plants but five or ten acres manages to hold his own; and when his trees begin bearing, he can handle the fruit at a smaller profit than the man who must hire his help and pay interest. This locality is being surrounded by many small orchards and we are thankful that there are few large ones. The small orchard will pay a greater profit per acre than a big one. It is usually better cared for, it is better plowed and better pruned. There is manure enough for a small orchard where the owner of a large one must buy chemical fertilizers. The owner's family can care for the fruit of a little orchard, while the big place must depend upon hired help. The little orchard can be irrigated when the ground needs it. It can be looked after when the fruit is just in prime condition, and there is less waste and less loss in the small than in the big orchard.

### Rainfall and Temperature.

The following data for the week ending 5 A. M., March 20, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week..... | Total Seasonal Rainfall to Date..... | Total Seasonal Rainfall Last Year to Same Date..... | Average Seasonal Rainfall to Date..... | Maximum Temperature for the Week..... | Minimum Temperature for the Week..... |
|----------------------|----------------------------------|--------------------------------------|-----------------------------------------------------|----------------------------------------|---------------------------------------|---------------------------------------|
| Eureka.....          | 22                               | 32.82                                | 47.93                                               | 33.31                                  | 56                                    | 32                                    |
| Red Bluff.....       |                                  | 24.45                                | 18.67                                               | 20.61                                  | 60                                    | 38                                    |
| Sacramento.....      |                                  | 21.54                                | 13.85                                               | 16.71                                  | 60                                    | 36                                    |
| San Francisco.....   | 66                               | 22.65                                | 16.10                                               | 20.26                                  | 58                                    | 40                                    |
| Fresno.....          | 10                               | 11.35                                | 6.17                                                | 9.36                                   | 64                                    | 34                                    |
| Los Angeles.....     | 11                               | 12.48                                | 6.40                                                | 16.65                                  | 68                                    | 38                                    |
| San Diego.....       | 34                               | 10.71                                | 3.98                                                | 8.95                                   | 60                                    | 40                                    |
| Yuma.....            |                                  | 2.97                                 | 2.16                                                | 3.20                                   | 76                                    | 38                                    |

### Orange Growing in Los Angeles County.

Discussion of methods and policies with this important fruit is of constantly extending interest. This year's experience has put new life and courage into citrus fruit production, and plantings this year will be larger than for a few years back. At a recent Farmers' Institute at Azusa, Prof. Sumner of Claremont gave an address on orange culture, drawing from his experience and observation many interesting conclusions.

**Planting Orange Trees.**—My soil is open and porous, with a gravelly subsoil. But I find one or two strata of richer soil at different depths, so that the roots go deep and find moisture and fertilization. I have had the best success with trees taken from a soil similar to my own, though some Florida stock has done well. It pays to take the utmost pains to level the ground, remove all stones and thoroughly pulverize the soil six or eight inches deep before digging the holes. I would have the trees well puddled and carefully protected from sun, wind and rain, and set with the greatest care. The tap root should be twenty inches long, and no bruised roots be put into the hole. Every root and rootlet should lie freely and naturally and have no impediments to their growth. I would not tramp nor tread down the soil around these tender roots, but settle it with water. If you have proper soil and climate, and have selected the proper varieties and selected the best trees that can be found growing in soil similar to your own, and set them out in a thoroughly careful manner, you have gotten a long way toward a successful orchard. Alas, how many are perpetually handicapped by some undue haste, or so-called economy, or carelessness, before they come to the care of their orchards. I believe the difference between success and failure is determined in many, perhaps half our orchards, before this stage is reached. No amount of care and cultivation and fertilization can recover what has been lost up to this point. Trees may live and do pretty well, but by no possible means can they be made to do exceedingly well, which alone, by and by, may make them profitable.

No man, of course, would set orange trees without an ample supply of water in prospect. But let us never forget that water is not the only nor indeed the main thing. Care is the great thing with the orange tree. No tree will bear more abuse and live. No tree is more responsive to good care. Cultivation is of primary importance; once or twice a month two ways, if not three, when set out in quincunx order, for at least eight months in the year, is necessary to the best results. I would follow the cultivator with a fine harrow. One of the most successful orchardists I know said to me: "I have found that the harrow puts off the need of irrigation ten days."

This is not too strong language if the harrow follows immediately the cultivator. It is not well to irrigate too near the trees, but rather seek to draw the roots out away from the trunks. Each year I rely less on water, necessary as that is, and more on stirring the ground thoroughly and often. My trees are none of them more than six years in the orchard, but so far I am confident it is best to plow at least once in the winter, and I have had to plow twice to keep my land level for irrigation. I plow deep in the center of the rows and more shallow near the trees—one year in one direction and another in a different direction. My trees require thorough irrigation once a month through the summer, especially since they began to bear heavily. I have used barn and sheep manure each year. One year I used some nitrate with good results. I am beginning more and more to question whether bone meal in some form might not, at least in part, be used to better advantage.

If there are commercial fertilizers which do what they claim to do, and which are practically cheaper than these manures, I should like to know it. Some of my friends have had excellent results from these natural fertilizers in spite of our more scientific testimony. They get good growth of tree and remarkable crops year after year. What test is better? One of my neighbors has been experimenting, under competent direction, with commercial fertilizers, and the first year with scarcely appreciable results, and the second year promises little more. He tells me that, on going from place to place, no results are apparent without very close inspection.

I have so far trimmed very little. My aim is simply to keep the lower limbs from the ground, cut in the abnormal branches and take out the cross branches. I believe in low branches and low fruit, even though the soil near the trunk is not wholly stirred by the cultivator. Still, I like to see the tendency toward the egg shape.

I have given no attention to the matter of cross fertilization save that I have noticed the tendency of the bloods to take on the marks of the navels by which they are surrounded.

I have not spoken particularly of the distance which the trees should be placed apart, because my experience has not yet been sufficiently long continued. So far, I see no reason to change my early decision to place the navels and most of the budded varieties twenty feet apart. The natural fruit should certainly be twenty-four feet apart. I firmly believe that the trees require all that the land can give at these distances, and to place anything between the rows is very poor policy. My attempts to raise grain in the orchard, in order to plow it under for manure, have proven worse than failures. I prefer to get my fertilization from outside unless I find something more feasible than I have tried.

In closing, permit me to say, in my judgment, the raising of oranges is one of the most fascinating of outdoor employments. If for any reason one needs or chooses to spend most of one's time in the open air, I know of nothing, all in all, more attractive. Properly carried on, it is certainly remunerative, and I believe will be remunerative so long as any of us are interested in that phase of the matter. But withal it is exceedingly interesting. It requires enough of brain work to take it out of the plodding routine. The tree is so hardy, and yet so sensitive to good, even tender, care and nursing; its growth, changes and development are so rapid; its processes of flowering, fruiting and ripening so continuous throughout the entire year that the grower is kept interested, alert and active; his hopes are stimulated and his anticipations are gratified all the time. A man comes to love his trees. They become pets. He enjoys living in his orchard. He never wearies of it. However absorbing the occupation from which he has turned aside, he finds in his orange orchard all the conditions to pleasantly occupy body and mind.

### Alfalfa Growing in Tulare County.

**W. W. Kelly, Visalia.**—Have had twelve years' experience with 180 acres of alfalfa, on "second bottom" of sandy loam. Water is found from ten to twelve feet, the soil being moist down to water. Prepare land by leveling, and plowing shallow furrows, that it may be flooded successfully; then plow about eight inches deep; sow twenty pounds of seed per acre, broadcast, and cover to a depth of one-half inch. In this State, we sow about January 1st. The first year, give plenty of water, and mow often, say four or five times; mowing does not hurt the alfalfa, but will retard the growth of the weeds. I irrigate once or twice each year, according to the dryness of the season. It can be irrigated at any stage of growth without injury. From one to two inches of water each time is used. We get water from a stream. Alfalfa needs from two to three times more water the first than later years. After the first year, I get three cuttings, with good fall pasture; it yields 14 tons per acre each cutting. Cut for hay when the field begins to look blue from the bloom; for seed, when the seed is thoroughly ripe and dry. The second cutting is preferred for seed. In this county, we cut one day, rake the next, and stack two days later. If hay is thoroughly cured, there is no danger of it heating. Total cost in stack, \$2 per ton, on land valued at \$100 per acre. Baling costs \$2 per ton, the bales weighing 200 pounds; the size does not affect its keeping qualities. An ordinary yield of seed is ten to thirteen bushels per acre. A wheat thrasher, with a few small changes, is used here. Average price of baled hay, about \$8 per ton; seeds sell for \$5 per bushel. An acre of green pasture will keep ten head of swine. It is good for horses; cattle and sheep sometimes bloat, but if allowed to stay on the pasture all the time, with access to a stack of dry hay or straw, and plenty of salt, they will seldom bloat. The thrashed straw is worth one-sixth as much as that cut for hay alone. Alfalfa gives a good yield the second year, and will continue vigorous, unless pastured too severely. If it is desired to rid land of alfalfa, plow two inches deep with a sharp plow, and the work is done.



# THE FIELD.

## The Great Wheat Problem—No. 5.

### California Growers Give Their Experience and Beliefs.

As promised in last week's *RURAL*, we continue the publication of reports from wheat growers in all parts of California concerning their experience of the cost of producing wheat and their views of the wheat situation generally. For the reports we are indebted to the California State Board of Agriculture.

#### STANISLAUS COUNTY.

*A. L. Cressey, Modesto.*—Including seven per cent interest upon value of land upon which raised, also wear and tear of equipment, wheat costs me as follows:

|                          |                |
|--------------------------|----------------|
| 10 bushels per acre..... | \$ .39 per bu. |
| 15 " " ".....            | .29 " "        |
| 20 " " ".....            | .24 " "        |

The present value of land upon which wheat is raised at above cost is \$10 per acre. Ten bushels per acre should be the yield to make wheat growing fairly profitable in this county. A very small proportion of the land produced this amount during the last two years.

I would urge the early completion of one of the isthmus canals, preferably the Nicaragua, which should be built by the United States and owned by it absolutely; also some national legislation in favor of American shipping, so that all American products may be carried to market in American vessels, thereby putting us within forty days of European markets, and doing away with the expense of grain bags.

#### MERCED COUNTY.

*H. C. Wolfson, Merced.*—As your questions are rather difficult to answer, I have concluded to submit a few statements of my actual experience in farming. My farm consists of 2572 acres—1800 acres being first class, the balance being creek and second-class land which I purchased in 1879 at \$20 per acre. Eight or ten years after this land was valued at from \$40 to \$50 per acre. My main product is wheat; some barley, about fifty to one hundred head hogs, and butter from eight to twelve cows. I have attended strictly to business, and conducted everything in a very saving way. No money has been spent extravagantly or by mistakes; am working on my own capital, hence no interest.

|                                                    |             |
|----------------------------------------------------|-------------|
| Capital invested, 2572 acres at \$30 per acre..... | \$77,160 00 |
| Stock, seed, machinery, etc.....                   | 11,700 00   |
| Total.....                                         | \$88,860 00 |

On this investment I made, from October, 1886, to October, 1891, nearly eight per cent per year. The price received for my wheat was \$1.33 per 100—at \$1 per hundred I would have made two and three-fourths per cent. On the same farm for 1894, sold my wheat at 75 and 80 cents and found myself a little behind.

In 1892 I bought a farm close to Merced, 1360 acres, for \$33,000. In 1893 my crop consisted of hay, barley and wheat, of which the latter was the principal, and sold at \$1 per cwt., which netted me six and one-third per cent on my investment. This year I am \$1300 behind, rating the wheat at 75 cents per cwt.

Regarding feeding wheat; have had some experience, and calculate it takes five pounds of wheat to make one pound of pork. I must say that I am at a loss to know what to do, but see no other way than to come down to rigid economy in county, State and Government affairs. Our extravagant ways of doing business must cease, or we will go down with the tide.

*John Swan, Livingston.*—The following figures upon cost per bushel for wheat in sack include seven per cent interest upon value of land, etc.:

|                                                                           |  |
|---------------------------------------------------------------------------|--|
| 10 bushels per acre, \$1.00 per bu.   25 bushels per acre, \$ .60 per bu. |  |
| 15 " " " .80 " \| 30 " " " .50 " "                                         |  |
| 20 " " " .75 " \| 35 " " " .45 " "                                         |  |

Two-thirds of the wheat land in this county now yields three sacks per acre, which makes wheat-growing fairly profitable at one cent per pound. The present price of wheat land in this county is from \$10 to \$40 per acre.

I have had experience in the use of wheat as feed for animals and see no reason why it should not be so used, either alone or mixed with other grains. With wheat at present price, I think it would be more profitable for growers to feed a large proportion of their wheat, and market cattle and swine thus fattened.

*M. C. Burchell, Plainsburg.*—Wheat costs me per bushel in the sack, including interest at seven per cent upon value of land, twenty-five cents if the yield is twenty bushels per acre. The present value of wheat land is \$40 per acre.

To make wheat-growing fairly profitable in this county at one cent per pound, land should yield twenty-one bushels per acre, but only fifty per cent of the wheat land now yields this amount.

I have had no experience in the use of wheat, as feed for animals, but at present prices I think it would be more profitable for growers to feed a large

proportion of their wheat and market cattle and swine thus fattened.

#### FRESNO COUNTY.

*Alpha A. Webber, Selma.*—I am one of the largest hog raisers in the San Joaquin valley. I also raise about two thousand acres of wheat each year. Three and one-half to four sacks per acre is a full average yield. It cannot be raised for less than ninety cents per hundred pounds without loss. At that price the farmer is working for his board and clothes. It would not pay to feed wheat to hogs to a large extent at present prices—three and one-quarter cents for hogs and seventy cents for wheat.

Two years ago hogs sold for seven cents, now three and one-quarter cents. One year from now they will be selling for two and one-quarter cents. At these prices it would not pay to feed wheat; better sell at seventy cents per hundred pounds.

Wheat soaked or ground is excellent feed for growing pigs. It is better than barley to fatten, but not equal to corn. Feeding wheat to hogs will kill the hog business. It has greatly injured it this year.

If the saving banks would reduce interest to farmers on present loans one-half, it would save the farmers of the State as well as enable the banks themselves to continue through the depressed times and prices. They had better do it than take the farms, as they will have to do if they keep up the present rate of interest.

Government ownership of railroads would greatly assist in the reduction of freights. If the State or U. S. Government would loan legal tenders directly to the farmer at two per cent it would greatly help. Universal employment of laborers at fair prices would create a market for our produce right here at home. One million of men are out of employment in the United States, equal to a loss yearly of \$3,000,000,000 to this nation. Three billions would pay for some hogs, wheat and merchandise.

*O. H. Easton, Borden.*—With a yield of ten bushels per acre, wheat costs me fifty cents per bushel in the sack, which includes interest upon value of land. The present value of good wheat land is \$12.50 per acre, and in order to make the growing of wheat profitable at one cent per pound the yield per acre should be fifteen bushels. About one-third of the land in this county now produces the above amount.

I have had experience in feeding wheat to hogs; it pays better than to sell at present prices.

#### TULARE COUNTY.

*John Tuohy, Tulare.*—I am at present engaged in wheat-raising, and, with proper cultivation, I consider an average crop for this county to be six sacks or fourteen bushels per acre, with the average value of wheat land at \$20 per acre. One year in every six is an off year, and is not counted in giving an average of a crop.

On unirrigated land a family should own 640 acres; on irrigated or naturally damp land 240 acres. On the unirrigated land one-third should be summer-fallowed each year, one-third winter-plowing and one-third volunteer. Forty acres of the 640 should go to buildings and pasture. It will take \$4000 in improvements, teams, wagons, etc., to equip 640 acres. On such a farm, adding such as can be realized from the sale of eggs, chickens, hogs, etc., an American family can live comfortably; on less than that, they would lack some of the comforts. This is observation, not systematic calculation; and I know of no farmer who keeps a systematic account of incidental expenses but believes that such an account would be of advantage to him. I think the price of wheat is down to stay. In combination with other feed, such as alfalfa, wheat at present prices could be profitably fed.

I am a convert of Mr. Lubin's theory that wheat, as much as any other product or industry, deserves governmental stimulation. It assists in adjusting with foreign countries the balance of trade, and I think if wheat growers had one-half the perseverance the silver men have in advocating their rights, the Government would give this industry more attention and respect.

*R. O. Newman, Visalia.*—Wheat costs me, including interest upon value of land, as follows:

|                                                                       |  |
|-----------------------------------------------------------------------|--|
| 10 bu. per acre, \$ .58 per bu.   25 bu. per acre, \$ .23 1-5 per bu. |  |
| 15 " " " .38 1/2 " \| 30 " " " .19 1/2 " "                             |  |
| 20 " " " .29 " \| 35 " " " .15 " "                                     |  |

The present value of land upon which wheat is produced at the cost named above is \$40 per acre. Land should yield fifteen bushels per acre to make wheat-growing profitable at one cent per pound. About one-fourth of the wheat land in this county now yields that amount, the average being eleven bushels.

I think wheat could be used with other grains as feed for swine, and mixed with cut hay or straw and dampened for horses or cattle.

I cannot see how the use of wheat as feed for stock can help us out of the dilemma, as it would interfere with the price of other farm crops and thereby react on us in a very short time. I do not think the trouble lies in the amount of wheat produced. The world's crop is no greater than an average yield. I lay all the depression in prices to the financial policy of our Government. The single gold standard has increased the purchasing power of the

dollar, and unless there is some change in the management of our finances by the Government, so as to give a greater volume of currency, I am unable to see any prospect of better prices for wheat in the future.

When we come to consider the condition of the San Joaquin farmers, it is deplorable. Our wheat yield on an average is about eleven bushels per acre, and it costs, at present prices of labor and other necessities, about fifty-two cents per bushel to produce it. Wheat is worth to-day, delivered at our nearest railroad station, thirty-nine cents per bushel. Freight to Port Costa (December 1894) is \$4.50 per ton. We have been promised a reduction of eighty cents per ton on the first of January, but it is a very light concession as compared with the whole.

## In Reply to Mr. Green on Cost of Wheat.

TO THE EDITOR:—Solving the wheat problem is becoming quite interesting, especially to those who figured low down as to the cost of producing a bushel of wheat. I notice that the types made me say that I could put wheat in the sack for eighteen cents a bushel, and, as a consequence, I expected just such a nut as my friend Warren Green has given me to crack.

Now, as a starter, I really do not remember to have used that figure in my estimates (made at the request of the secretary of the State Agricultural Society), but I may have done so, using the figure 18 instead of 28, which comes nearer to the mark. In preparing my statement I figured each problem separately, as I presume all did, and in transferring the figures mistakes may have crept in. Unfortunately, I did not preserve the sheets containing my trial figures; hence I cannot reproduce them for my own satisfaction nor for Mr. Green's.

With your permission I will submit figures on the cost of wheat at thirty bushels to the acre on summer-fallowed land yielding but one crop in two years, crediting for nothing to the land, in the way of pasture or feed, while lying in fallow, although I believe that tax money might be gathered from the land by judicious management. I will put the value of the land at \$50 an acre, the tax at one per cent and the interest at seven per cent. The figures are thus:

|                                  | Per Acre. |
|----------------------------------|-----------|
| Plowing .....                    | \$ 1.50   |
| Seed .....                       | .75       |
| Sowing and Harrowing .....       | .25       |
| Harvesting .....                 | 2.00      |
| Sacking (30 bushels).....        | .80       |
| Interest on land—\$50—at 7%..... | 3.50      |
| Tax on land at 1%.....           | .50       |
| Total.....                       | \$ 9.30   |

If this can be done an annual sowing, the wheat is produced for thirty-one cents a bushel.

|                                                                                   |         |
|-----------------------------------------------------------------------------------|---------|
| For a summer-fallowed crop we must add an additional year's interest and tax..... | \$ 4.00 |
| And say five additional sacks.....                                                | .30     |

Grand total.....\$13.60

#### At these figures

|                                       |               |
|---------------------------------------|---------------|
| 30 bushels will cost per bushel. .... | 45 1-3 cents. |
| 35 " " " " .....                      | 38 6-7 " "    |
| 40 " " " " .....                      | 34 " "        |
| 45 " " " " .....                      | 30 2-9 " "    |
| 50 " " " " .....                      | 27 1-5 " "    |

The figures for labor and material are those prevailing in Sutter county, and the harvesting is done by the so-called combined harvester.

My estimates are based on the proposition that the farmer can hire, free of board, all the work done, paying the rates named; or if he chooses to do the work himself, he will receive pay for his labor while producing the crop. I have added nothing for marketing, which is a small item of pleasant labor—and the more the merrier! I might add that no farmer in the county resides beyond the sound of a transportation steam whistle on river or rail. The cheapened labor and the labor-saving machinery have very largely reduced the cost of wheat, but the greatest factor in the cheapening process is the combined harvester. The rate given above is the outside figure at which the machine enters our fields; it does the harvesting and sacking, the harvesters coming to the house for nothing but water. The rate given applies only to the great steam harvesters that do the best work and the most of it. Other machines do the harvesting at considerably lower rates. Smaller yields will, of course, cost proportionately more, and biennial cropping being the surer method, is also the most profitable.

GEORGE OHLEYER.

Yuba City, March 11, 1895.

## Will Mr. Davis Explain?

TO THE EDITOR:—I wish to have Mr. E. W. Davis of Santa Rosa explain to the readers of the *RURAL PRESS* in what year, or was it before the war, that he raised ten bushels of wheat from one acre of land at a cost of \$6.50, or 65 cents per bushel, and paid at the rate of seven per cent interest on land valued at \$70 per acre, or \$4.90 interest on one acre.

Also, is there not more difference than ten cents per bushel on thirty bushels to the acre or ten bushels per acre? Does he not have the same interest to pay and the same expense, except in the difference in thrashing and sacks, whether he has a



crop of ten bushels per acre or a crop of thirty bushels per acre? Ten bushels per acre, at 65 cents per bushel, cost \$6.50. Thirty bushels per acre, at 55 cents per bushel, cost him \$16.50, according to Mr. Davis' own figures.

Does it cost \$10 more to thrash and sack thirty bushels of wheat than it does to sack and thrash ten bushels of wheat? If so, the man who thrashes and sacks Mr. Davis' crop of ten bushels per acre will have to pay him a bonus for the job.

It is customary in Mr. Davis' section to charge eleven cents per 100 pounds for thrashing, and sacks are worth from 6½ to 7 cents each, and the interest on land at \$70 per acre would be at seven per cent, as he says, \$4.90; sacks for ten bushels, 30 cents; thrashing ten bushels, 66 cents; total, \$5.86.

Without allowing anything for seed, plowing, harrowing, cutting, stacking, etc., we find that there is 64 cents which Mr. Davis has left to plow, sow, harrow, cut and stack and furnish seed for one acre of wheat. If he can do all this for 64 cents per acre, I wish he would tell the readers of this paper how he does it, if he has no patent on the process.

Santa Rosa. READER.

This discussion promises to be highly interesting. Mr. Ohleyer has met his critic; now it is Mr. Davis' turn.—ED. RURAL.

## FRUIT MARKETING.

### Another Plan for Handling Raisins in Fresno.

There was a meeting of raisin growers in Fresno last Saturday which heard the report of the committee which was appointed at a former meeting to prepare a plan of co-operation, constitution and by-laws. The plan was approved but was not formally adopted, because it was not necessary. Each packing-house must adopt this plan, or such a one as is agreed on by all, and the general meeting has nothing more to do with it.

One very important matter was discussed, viz: The proposition that the pack must be limited, and that no second-crop raisins will be packed. This will cut off one-third of the crop, and will leave only the best grades to go to market. The second crop may be sold for brandy, may be fed to hogs, or may be put up as dried grapes to be sold as such.

This year's total output, counting both first and second crops, is estimated at 4800 carloads or 48,000 tons. This is 8000 tons more than last year. By rejecting the second crops it will bring the total output down to 32,000 tons, and all will be high-grade goods. There never has been much difficulty in selling first-grade raisins. The trouble has been in the second crop.

Committees were appointed at the meeting to organize local packing-houses in all parts of the valley where there are raisins. So far there has been no objection on the part of the growers to the plan, except that the belief is growing among them that the only final and satisfactory solution of the trouble of making raisins pay will be reached when the growers stand together and demand cash for their product in the sweat boxes.

The plan of selling raisins through commission houses had proved very unsatisfactory. Meetings were called early this spring, and ideas were exchanged. These developed into a general plan, and a few weeks ago a large meeting of growers was held and a committee was appointed to formulate a plan of action. It was the report of that committee which was heard on last Saturday.

To sum up the plan without entering into details, it is proposed to build a packing-house in each district of the county. A district is understood to mean enough vineyards in one community to furnish, say, 2000 tons of raisins. But there is no exact amount. That is left indefinite so that each district can suit itself as to size. These packing-houses are not to cost more than \$2000 each. Each district is to govern itself by its own laws to a great extent, but all will unite in one thing, and only one—that of selling. Each packing-house, company or association will pack its own raisins and prepare them for market.

The selling is to be left entirely to a committee. This committee is to consist of one delegate (or more if it should be thought best after due consideration) from each packing-house. It is expected that each packing-house will empower its most capable man, and one in whom all have confidence, to act for it on the selling committee. This delegate must have absolute power to act for his packing-house, and those who send him will leave the whole selling business to him.

These delegates, one from each packing-house, will meet and arrange prices, styles of packing, sales and all details in which the packing-houses have an equal and mutual interest. It will be the executive board, acting for all. The committee will have grave responsibilities resting upon it, and for this reason it must have full power to act in any emergency that may arise.

The manner of accounting for sales is simple.

Whenever a sale of raisins is made the proceeds are to be divided pro rata among all the packing-houses, in proportion to the amount of raisins each house has packed ready for market. For instance, if twenty packing-houses had raisins ready for market, one 50 tons, another 100 tons, another 200 tons, and so on, and the committee would sell 200 tons, and get all of them from one packing-house, the money would be divided among all. The house which had fifty tons ready would get half as much as the house with 100 tons.

By this means, whenever a sale is made, every grower who has any raisins in any packing-house in the association will get his share of the money. When prices are good all will get the benefit of the prosperity; when prices are poor all will bear the misfortune equally. If there is profit in the early sales all will share it. If loss occurs late in the season all will share the loss also. The growers will prosper together or suffer together.

No person who is not interested in raisin-growing can belong to the association. The only place where any harm could be done to the association by a person hostile to it would be in the executive committee, and each packing-house is supposed to see to it that the delegate it elects to that committee is loyal.

The plan is based on the assumption that the local banks will advance money necessary to build packing-houses. Not more than \$30,000 will be needed for this purpose. This is to be repaid by taking as toll \$1 from the price of each ton sold till the amount is sufficient to liquidate the indebtedness. The money with which to pick the grapes, buy trays, pay for packing and shipping is to be secured by the indorsement of the different companies and to be repaid from the proceeds of sales.

It is stated that before the financial portion of the plan was presented to the growers, the assurance had been received from the banks that the money would be forthcoming on such security as the different companies could give.

### Southern California Fruit Exchanges.

The progress of these exchanges is of great interest to all who are moving forward toward co-operative fruit marketing by producers. During the citrus fair in Los Angeles last week the representatives of the southern exchanges were invited to assemble and discuss their progress with the business men of Los Angeles. Delegates were present from all the local exchanges of southern California. The hall was filled with a most attentive audience, and at 11 A. M. the meeting was called to order by W. C. Patterson, president of the Los Angeles Chamber of Commerce, who remarked briefly upon the good results already obtained by the exchanges, working upon the plan of their motto: "The greatest good to the greatest number."

E. C. Kimball was elected secretary and the opening address was given by A. H. Naftzger, president of the Southern California Fruit Exchange, who spoke at length upon the satisfaction given by the work of the exchanges, and the dire necessity out of which the system had grown.

The exchange method used the most direct means to put fruit into the hands of the consumer, and was neither a trust nor a corner, nor did it seek to injure the commission men. It only took measures to protect both the buyer and the producer, and thus insure a reasonable profit to the fruit-growers.

The eight incorporated fruit exchanges represented 4000 cars of oranges this season. The whole was managed by an executive board, and each exchange had its own particular district. Thirty-one local associations were represented by the exchanges, and 4000 fruit-growers. Their present output is of the value of \$2,500,000, and they expect in time to include all the growers in southern California.

The great object of these fruit exchanges was to market the crop with the least possible cost between the grower and the consumer. The exchange system cost only two or three per cent instead of the old rates of from seven to fifteen per cent paid to commission men. Freight expenses were reduced about \$100,000 by this system of co-operative marketing.

While the exchange system was purely co-operative, no salaries were paid except to secretaries and accountants, and the mutual-benefit idea was maintained throughout.

The history of co-operative marketing, its past, present and future, was given in an address by T. H. B. Chamblin, organizer of the southern California fruit exchanges. He gave many details concerning the defects of the old system and the developments of exchanges, and dwelt at large upon the great importance of the citrus fruit industry in southern California.

After Mr. Chamblin's speech the features of the detail work and routine business of the district exchanges were given by S. C. Evans Jr., acting for W. A. Perry, general secretary of the Riverside Fruit Exchange.

Responses heartily indorsing the exchange system were made by representatives of the various business interests of southern California, the speakers being

J. O. Kospfli, president of the Merchants' Association; Major E. W. Jones, for the Chamber of Commerce; Major E. F. C. Klokke and William McFadden.

The representatives of the different exchanges present were: H. R. Smith, vice-president of the Southern California Fruit Exchange; A. H. Naftzger, president of the Riverside Exchange; T. H. B. Chamblin of Riverside, organizer of exchanges; Mr. Douglas de Duarte, J. C. Frisbie, E. A. Churcher and H. F. Narcross, representatives of the executive board, all of San Diego.

A resolution offered by Charles Forman, seconded by J. O. Kospfli, and unanimously passed, was to the effect that, believing that the advantages of southern California are of a kind to attract a class of people desirable to any community, and the horticultural and agricultural resources are such that, with proper management, a fair interest on investment in these lines can be assured, and realizing that upon the successful marketing of the products of southern California depend its future, and the system as inaugurated by orange-growers known as the Southern California Fruit Exchange, now in its second year of operation, has proven such an unqualified success, demonstrating that there is a market for fruit products and growers realize fair returns for their labor and money invested, the assembled representatives of the affiliated business interests of the city of Los Angeles heartily indorse the system and pledge to the management their unqualified support.

## FRUIT PRESERVATION.

### Fruit Drying in a Coast Valley.

Mr. W. H. Bowman, an orchardist at Corralitos, Santa Cruz county, gives the Watsonville *Rustler* an outline of his experience in fruit growing and drying in a region near the coast, which will be interesting to other fruit growers in similar regions. He gives the cost of an evaporator with a capacity of five tons of fruit every twenty-four hours, with buildings, at about \$3000. Five such dryers, if under one building, would cost \$10,000, run by one engine. These five dryers would have a spreading capacity 12,000 square feet.

Prunes go four pounds to the square foot, or twenty-four tons to the five dryers, and in twenty-four hours about thirty or thirty-five tons. Peaches and apricots go two and a half pounds to the square foot; silver prunes over five pounds.

In conjunction with such a plant you would require 10,000 eight-foot trays, which would cost about \$3000. These trays are for use in drying prunes and apricots when the weather permits, or they could be used to receive the partially dried fruit from the evaporator trays, when there is too much fruit for the evaporator. Two hours in the evaporator will dry your fruit sufficiently, so that if you have to put it outside you can save it, if you do not have any sun. You will need one five-ton evaporator for every ten acres of fruit in full bearing.

The cost of drying, per ton of dried fruit, is as follows: Prunes, unsacked in storehouse, \$8.75; sacked, f. o. b., \$12. Apricots, unsacked in storehouse, \$27.50. Peaches—Muirs, \$25; Salways, \$30; Crawford's, \$37.50. These estimates do not include the cost of gathering or hauling to the dryer.

The number of pounds of green fruit to make one pound of dried fruit is as follows: Peaches—Muirs, 5; Salways, 6; Early Crawford, 7½. Prunes, 3½. Apricots, average, 5½. Mine went 4½ last year. I had 53,800 pounds of Blenheim apricots, green, which sacked 11,229 pounds dried. I also dried some on shares, and they went six pounds to one, but this was owing to a bad system of growing, of which I will speak later.

The whole cost of dried apples, boxed, f. o. b., is five cents. Now, for the last few years they have been from six to eight cents, for the quality known as choice (San Jose standard). The cost of five cents includes the price of apples at \$7.50 per ton. You can draw your own inferences from the above statement.

I think it is practicable to run an evaporator at Watsonville, if you can produce in Pajaro valley a quality of fruit, when dried, that will be first-class in size and appearance. The question then arises: Do we produce such fruit, outside of apples, at the present time? The answer is: We do not. But this does not prove that we cannot. I contend that we not only can but we have done it, and can do it again, if we pursue a thorough system of cultivation, pruning and thinning.

No one can expect to have large fruit with trees bearing two or three times as much fruit as they should. Nor can we expect the fruit to have a good color when the tops of the trees are so thick with foliage that the sun cannot penetrate. The brighter a peach or an apricot is green the brighter it will be when dried.

Such fruits as peaches, apricots, pears and apples can be thinned to advantage so as to produce large fruit; but it is not practicable to thin either prunes or cherries. The only way to handle these two kinds



is to so thin out the limbs of your trees that they will produce the sized fruits that will pay to handle. If your prune trees produce prunes that go 150 to the pound when dried, cut out one-half of the bearing wood and you will get prunes that will go 60 or 70 to the pound, which are worth three times as much and will net you twice as much per tree.

In regard to cultivation. If one desires to have his orchard so clean that not a weed can be seen in it at any time during the year, he must use fertilizers, or else it will run out. The leaves from the trees mixing with the soil is not enough to keep it up to the original productiveness, with the heavy drain that is put upon it by bearing heavy crops of fruit on the trees on its surface. Every farmer knows that raising the same kind of grain crop on the land year after year in succession, without using fertilizers, will wear out the best land in existence, so that it will not produce half a crop. Just so with fruit trees. You either have to use fertilizers or allow vegetation to grow rank and then turn over with the plow. Each kind of fruit tree takes such properties out of the soil that it needs to produce its kind of fruit, and hence drains the soil of those properties. The Almighty, in his wisdom, has made the grasses and, what we consider great pests, the weeds, which force us to cultivate and which, when turned under by the plow, enrich the soil so that it can produce its abundance.

Each kind of fruit has to be thinned differently. The peach should be thinned four inches apart and before the pit begins to harden. The fruit of the apricot tree should be three inches apart. Apples, two in a bunch, and so forth.

One year my whole crop of French prunes averaged 60 to 70 to the pound. There is another orchardist here who had the same results. Hence I say that Pajaro valley can, with proper cultivation, pruning and thinning, produce a choice quality of fruit of nearly all kinds, that will pay good interest on the investment, year in and year out.

## HORTICULTURE.

### The Citron of Commerce.

J. H. Cammack, of Whittier, who is giving commendable attention to information on possible extensions of the fruit products of southern California, has a letter in the *Los Angeles Cultivator* on this subject:

It is said of the citron that it was the first of the citrus family introduced into Europe. Just why, we cannot conceive, unless it was grown as a hedge plant as formerly in the province of Messina. It is now principally grown in southern Italy, Coloua and the islands of Sicily and Corsica. The French island Corsica produced about five and one-half millions of pounds of this fruit in 1885, or, as we say, 262 carloads of the raw fruit.

It is chiefly prepared for market at Leghorn. Sometimes before shipment, but usually afterward, it is put into salt pickle, where it may lie three months if necessary. When removed from this brine they are boiled in fresh water until sufficiently soft, usually about sixty to seventy-five minutes. They are then cut in halves, the inner part carefully removed from the rind, which latter is placed in cold water for twenty-four hours, when it is said to assume a green color. Next, these pieces are put into big earthen jars with hot syrup, the sugar in the syrup being gradually increased. After that the pieces go into boilers containing heavy syrup made of crystallized sugar and a little water and boiled until they become thoroughly saturated with sugar. This is repeated until they will not absorb any more sugar, when they are placed on a wire netting to dry. Eighty pounds of sugar are used in preparing 100 pounds of citron.

Ten years ago the manufacturers paid five to six cents per pound for the fruit as it came from the brine. In 1885 the United States used nearly 2,000,000 pounds of prepared citron, valued at \$261,566.61. Considering the quantity used, it becomes apparent that the citron is a product of considerable commercial importance.

Doubtless the point of interest to the reader is whether it can be successfully grown and prepared in this country. I believe it is safe, yes to both phases of the question. In protected localities, where the frost is not severe, the tree thrives admirably. I grow no more thrifty nor productive trees than my citrons. They come into bearing quickly—the next year after planting—and the demands for the fruit are many fold greater than the supply. First quality citron brings at least three cents per pound. I have now an inquiry from San Francisco for from five to fifty tons of the fruit. With cheap sugar and our sheltered localities planted to this product, California ought to grow all the citron consumed in the United States at least.

There has been confusion and considerable disappointment about getting valuable strains of this unique citrus fruit. Varieties can now be secured that are quite satisfactory. I recently came into possession of a new introduction from Corsica, which will be tried. As an experiment I have grown a

number of seedling varieties, some of which are very promising.

On account of the tender nature of the tree, intending planters should insist on having the trees grown on sour stock. The trees may be planted sixteen feet apart, or 170 to the acre. They must be pruned low, have plenty of water, and stand on rich soil. Remember, it is the rind the grower wants. Considering the quantities used and the rather limited areas where the tree succeeds, it would seem that overproduction is very remote.

### Large Orchard Planting at the South.

The most extensive tree planting operations that have been undertaken in Pomona in years, says the *Progress* of last week, are now being prosecuted by Henry M. Loud of Oscoda, Mich., who owns several hundred acres of fine land in that valley. Mr. Loud has a large force of men and teams at work and has already planted within the past few weeks fifty acres to deciduous fruits, and before he has finished will have between 200 and 300 acres east of Pomona, south of the Southern Pacific railroad track, set to prunes, apricots, peaches and a few olives. He is also going right ahead as fast as the land can be prepared to plant 150 acres more northeast of Pomona, near Claremont, to citrus fruits. Mr. Loud is satisfied that fruit orchards—either citrus or deciduous—in this valley are good investments. He has the means to improve the land in the best possible manner and take excellent care of it. His orchards in a few years will be a leading attraction of this valley. He says that, if he can get the land ready, he will set the whole 500 acres that he owns in this valley to fruit orchards this spring, but he may not be able to do so much.

Mr. Loud will attempt an experiment in citrus fruit culture that will be watched with interest by fruit men in all parts of the country. He has contracted for 3000 grape-fruit nursery trees for planting this spring. This fruit has become a staple article in the Eastern market, bringing a higher price than any other citrus fruit, and it is a well-known fact that every grape-fruit tree in Florida has been killed outright by the cold weather of the past season. Mr. Loud thinks that southern California should supply the Eastern market with this fruit, and sees an opportunity that he has been quick to grasp. There is little grape-fruit nursery stock in the country, and it was with difficulty that Loud & Gerling could get the trees to fill Mr. Loud's big order. In Riverside grape-fruit nursery stock is selling at a dollar a tree, and the scarcity of the supply will limit the planting of this fruit for several years.

## THE POULTRY YARD.

### Treatment of Setting Hens.

This is a subject of perennial interest, and one upon which poultry keepers, especially amateur or farmyard operators, always like to confer. No operation requires more intelligent and patient devotion, and in none is there such sharp punishment for carelessness or neglect. Knowing how does not alone succeed; it is *doing* which ensures results. We find in the *Los Angeles Cultivator* some very pertinent suggestions by Mrs. Flora McFadden of Orange, which will be serviceable to many readers about these days:

The eggs from a choice breeding pen need careful handling, especially if they are to be kept long. Mine I put into a regular egg case, placing eggs in the fillers large end up, adding the day's gathering every evening. These cases are what the grocers pack eggs in for shipping. The cover is made to fasten and unfasten easily by inserting hooks and screw eyes at each end of cover and box. Change the position of eggs daily by turning case down on its side one day, standing it upright the next, turning on opposite side third day, standing it up the fourth and so on. Have kept eggs in this way in a cool place for five weeks, then had them hatch reasonably well, say nine or ten out of thirteen; of course, no one would expect eggs of this age to turn out quite as many chicks to the setting as though they were perfectly fresh.

Have tried various kinds of nests for setting hens, making them on dry barley hay in the hay mow, or on the dry ground, then again taking pains to build them of moist earth or of damp sand or of newly cut alfalfa, following the advice of the moisture fiends in the last instance. I think the eggs hatch exactly as well when set in a dry place as when so much regard is paid to moisture. Am satisfied there is more in the condition and temperament of the hen than there is in the dampness or dryness of the nest. Will explain why, further on. Of course, one needs to be careful to shape the nest in the right way, sides slightly rounded and no more eggs than the hen can comfortably cover. It is a great mistake to set too many eggs. Supposing one or two eggs could not be

well covered, time was when I thought, "well, what if she doesn't hatch those two? Let them alone, maybe they'll come out all right." I never thought—if I knew—about the hen stirring up her eggs and changing them around two or three times every twenty-four hours so that a different couple got a half-chill every time she settled down afresh. Maybe it took me quite awhile to figure out why those big settings did not turn out more than six to a setting; the why and wherefore finally glimmered through the denseness of my cranium, however, and after that I was content to "make haste slowly," giving Biddy from twelve to fourteen eggs, according to her size, and getting more chicks than when I insisted upon her taking from fourteen to sixteen.

When I first began raising chickens, and it was my custom to buy setting hens here and there wherever I could, I occasionally got hold of one that had not enough heat in her body to hatch the chicks properly. They would come out from one to three days late, and be not nearly as strong as others set at the same time from the same stock but incubated by a well conditioned, warm-blooded hen.

Perhaps some of you are tired hearing it, but let me echo the refrain once more, "The setting hen must be kept free from lice." It is best to powder her whether any lice can be found or not.

The following is a cheap and good powder to use, quite effective if used generously: One cup of Buhach or Persian insect powder, one cup of carbolated powder (crystals), two cups flour of sulphur, two cups of road dust thoroughly sifted and very fine. Keep in tightly covered tin can and it will never lose its strength. A good thing to apply the powder with is a "pepper box" made of a large baking powder can, the cover perforated with a small wire nail, tapping with a hammer. Mix powder ingredients well; fill this can half full and dust well through the feathers to the skin. Powder it at least twice, once soon after she goes to setting and again about four days before she hatches.

During the hatching process I give the hen corn and water as she sets on the nest, disturbing the nest itself only enough to make sure that empty shells have not surrounded the piped eggs in such a manner as to keep pipers from hatching. If the hen is quiet I prefer to leave her on the nest for a few hours after all the chicks are out, not feeding them until the oldest are about thirty-six hours old. It is getting to be generally understood that the chick is fed with the yolk of the egg just before leaving the shell, thus they come into the world full of nourishment and need no feeding until they have digested and assimilated this first natural food. To urge food upon them before this is a positive injury.

It is well to put a thin layer of coarse, sharp sand in their coop the first thing. The little fellows pick at it readily and it furnishes their small gizzards the necessary grinding material—"sharpens their teeth," so to speak. Lacking the sand, I chop up a hard boiled egg, shell and all, mixing with bread crumbs moistened with sweet milk. In this case the bits of shell are the grit.

### Care of Young Ducks.

TO THE EDITOR: Will you kindly give me some information regarding the care of young ducks—how they should be fed, if they may be kept in the same brooder with young chickens, also if the disease among chickens known as "swelled head" is contagious?—MRS. T. M., Walnut Creek, Cal.

ANSWER BY MR. WHITMAN.

For the first three or four days feed hard-boiled egg chopped fine, mixed with a little milk and bread-crumbs; vary this with oatmeal. Have water always before them, but fixed so they cannot get into it, if you are raising the ducks to eat. Decrease the egg gradually and give cooked cracked wheat, varied with a mush composed of bran, middlings, cornmeal and cracked wheat mixed with warm water and a little salt. After they get to be two or three months old you can give them this mush every evening or morning and can put into it boiled potatoes or carrots or beets. Give them a little chopped meat after the first week, and after the first month wheat can be given once a day. To thrive well they must have green food every day.

Chicks and ducks should not be kept in the same brooder.

The disease known as "swelled head," or "roup," is certainly contagious, and all fowls or chicks affected with it should be placed in separate houses.

Alameda.

H. F. WHITMAN.

The following extraordinary item is copied from the *Commercial News*: The Greek Chamber at Athens recently decided by seventy-four votes to sixty-nine on the detention and destruction of the currant crop. The vote was entirely uninfluenced by party considerations; even ministers were not all on the same side. The opponents of the measure were chiefly deputies from Corinth, Argolis and Messina, whereas the representatives of the Western Peloponnesus and part of the Ionian islands supported it. Such a measure for improving the currant market seems, of course, most extraordinary to commercial ideas, but it is claimed by many that its enforcement for one or two years will save the currant trade from otherwise inevitable ruin. In any case, the size of the minority against it is certain to cause serious trouble. Many of the deputies disappeared before the vote was taken in order to avoid committing themselves.



## THE HOME CIRCLE.

## I'm Growing Old.

My days pass pleasantly away;  
My nights are blessed with sweetest sleep;  
I feel no symptoms of decay;  
I have no cause to mourn or weep;  
My foes are impotent and shy,  
My friends are neither false nor cold.  
And yet, of late, I often sigh—  
I'm growing old!

My growing talk of olden times,  
My growing thirst for early news,  
My growing apathy to rhymes,  
My growing love of easy shoes,  
My growing hate of crowds and noise,  
My growing fear of taking cold,  
All whisper in the plainest voice—  
I'm growing old!

I'm growing fonder of my staff.  
I'm growing dimmer in the eyes;  
I'm growing fainter in my laugh;  
I'm growing deeper in my sighs;  
I'm growing careless in my dress;  
I'm growing frugal of my gold;  
I'm growing wise; I'm growing—yes—  
I'm growing old!

I see it in my changing taste;  
I see it in my changing hair;  
I see it in my growing waist;  
I see it in my growing heir;  
A thousand signs proclaim the truth,  
As plain as truth was ever told,  
That, even in my vaunted youth,  
I'm growing old!

Ah, me! my very laurels breathe  
The tale in my reluctant ears,  
And every boon the hours bequeath  
But makes me debtor to the years!  
E'en flattery's honeyed words declare  
The secret she would fain withhold,  
And tells me in "How young you are!"  
I'm growing old!

Thanks for the years! whose rapid flight  
My somber muse too sadly sings;  
Thanks for the gleams of golden light  
That tint the darkness of their wings;  
The light that beams from out the sky,  
Those heavenly mansions to unfold  
Where all are blest and none may sigh,  
"I'm growing old!"

—John G. Saxe.

## Doctor John.

Of all the queer creatures you ever came across, Dr. John was the queerest. He looked queer. His figure was too broad for its height, and his mild, kindly brown eyes seem to be forever apologizing for the fierce little red mustache that tried in vain to hide the firm, pleasant mouth beneath it. He was not very young, fast nearing the forties, and the soft brown hair on his forehead was getting quite thin. In a few years more he must, of a necessity, bear the sometimes humiliating stigma "a bald-headed man." He was absent-minded to an alarming degree and a bit short-sighted. He had no home, but lived around in boarding-houses, carrying always about with him a small menagerie (picked up in India years ago), a stuffed tiger, with fierce, horrible eyes, a parrot that refused positively to utter a syllable, but strutted about in a big gilt cage with becoming dignity, and a pale, grinning skeleton and brown, weazen-faced mummy, besides a lot of curios and antiques, for which this quiet, unobtrusive little old bachelor had a passion. Indeed, it seemed his one object in life was to collect all the queer things imaginable and carry them about from city to city in two mammoth trunks that called forth "curses not loud but deep" from long-suffering expressmen.

After drifting over half the world, he one day landed way down in quaint old New Orleans, and went looking about in all sorts of locations for "Rooms to Let" or "Boarding."

He found himself ringing the bell at a tall tenement house, away up above Canal street.

Somehow, he felt drawn to "inquire within" because of a certain homeliness (the word is coined, but just expressed it) that seemed to pervade the long, low doorstep, or perhaps it was the violet perfume that came from a little white willow swinging basket that hung just over the door. At any rate, Dr. John rang and was admitted.

The landlady (Dr. John saw at once that she was a lady—one of those delicate, refined women that abound in our large cities—women that have lost the golden apple of success and therefore must slay all the feelings of purple pride, theirs by right of birth and edu-

cation, and smilingly pander to the whims of a prosperous or bohemian set of people who board all the year round, and are pleasant or unpleasant, happy or unhappy, just or generous, as the case may be) arranged with him for her small front room without trouble. He thought her rooms exceedingly reasonable, but he did not say so. He only asked, in his mild, soft voice, if Mrs. Carlisle (for such was his landlady's name) would object to the stuffed tiger's resting quietly in an alcove just under the stairway.

Mrs. Carlisle was rather dubious.

A flighty young widow roomed on the first floor—a little affected, nervous creature, who declared she was afraid of the very shadow that sometimes danced or collided in a most gruesome fashion on the chamber wall, and then a family of mischievous, bright-eyed little boys, whose supreme delight would have been to pull the skin away from Mr. Tiger's lips or pluck out his baleful eyes, had apartments in a near vicinity.

But the little doctor had such a gentlemanly bearing, and without the asking laid out a month's board in advance, that the little lady agreed, and much sorrow came of it. The fluffy-haired widow alarmed the house at night with blood-curdling shrieks of "A wild beast from Sells' circus has gotten into the hall! Oh, save me! save me!" Dr. John did the heroic act, and explanations followed, but the little widow refused to be comforted, and gave notice that she would leave at once. And all the little bright-eyed boy babies belonging to the interesting family (who had filed out of bed, in their long white nightgowns, at the first piercing note of alarm) cried out, "Goody! I'm so glad she's a-doin' away. She won't 'et us tie her canary bird's feet to der cage. She won't 'et us shoot off our little pistols in der hall. So glad she's a-doin' away! Such a ninny—'fraid of a ole stuffed fink that can't even run," all of which greatly complicated matters.

But Mrs. Carlisle, with all her wealth of gentle tact, and the three girls, Marian, Minnie and Virginia, managed to arrange things amicably after a while.

Dr. John (who had been secretly very much frightened by all the clamor his perfectly harmless friend from the jungles had aroused in this rather fashionable city boarding-house) was happy. The little baby boys were sorrowful. The timid young widow remained—remained to cast languishing glances at Dr. John when his vis-a-vis at the breakfast table, but which were entirely lost on that odd specimen of bachelorism, who, on account of his short-sightedness and utter lack of self-appreciation, never even dreamed of it. Indeed, women didn't bother the gentle physician much, though he had found himself thinking once or twice that Mrs. Carlisle's three daughters were a rather pleasant addition to the dinner at five.

Marian, the eldest, a tall, stylish girl who seemed to dwell always apart—a dreamer and artist—who never had company in the parlor, but who was well up in all the leading topics of the day, and courted learning's dangerous, if fascinating, powers.

Minnie was just as different as could be. She was pretty and blonde and plump—no angles anywhere. A laughing, dazzling creature that pined in her secret soul for the wonderful delights that attended the rich and fashionable.

She yearned to be in "society." She'd had a peep into this fairyland and longed for a good, square, full-face glance, but, dear, dear! She was poor. How tiresome it all was! True, a few swell—"real society boys" called on her sometimes in the pleasant winter evenings, and one of them had even been bold enough to invite her to a little reception given by his recheche club. She had gone, and enjoyed it, too, in spite of rather chilling glances and unsympathetic smiles from the queens of the kingdom; and one or two whispers had reached her as to whom she could be? "Her mother keeps a boarding house, I believe," and other

little stings that might have sown evil seed had Minnie been less sunny-hearted. But she only laughed and danced and enjoyed through it all, and some of the more fashionable girls were really kind and sweet, and made her feel like one of them. But these pleasures were rare.

Still Minnie's dearest dream was to become a leader in fashionable life, and she was always using every means in her little power to aid in this much-desired end.

Virginia was entirely different. She had a little thin, dark face, and a wide lovely mouth.

She made fun of Marian and Minnie and their pet hobbies. She laughed shamelessly at poor unsuspecting Dr. John, his private museum, the cut of his coat, and his fierce little red mustache. She made fun of their keeping boarders, and even of the old genealogical tree (though in her secret heart she worshipped at its bulky shrine, and was every whit an aristocrat) that her mother so fondly treasured. She laughed at the old-fashioned furniture, and made faces in the rather murky French glass mirrors in their ponderous gilt frames, but rubbed the former till it looked new and shiny, and polished the latter until they grew actually ashamed of their dingy backgrounds, and reflected only the bright and flaming things. Yes, Virginia was an energetic little soul, and declared often that if things ever came to the worst, which they hardly ever do, that she would hire out as an artistic decorator of interiors, as her most fervent delight was in making the house attractive, moving the furniture, and rearranging the ornaments, draping curtains, or hanging pictures.

Again a fit of laziness would come over her, and she would lie on the sofa all day long; read the horrible "Heavenly Twins," "Trilby," or even one of Ouida's forbidden-fruit novels, of which, as a modest and self-respecting young woman, she should have known absolutely nothing.

Virginia was delightfully human, and what is better still, she was sympathetic.

The flighty widow, who never affiliated with Marian or Minnie, had taken Virginia into her confidence long ago—had told her how lonely her life was, or would be if it were not for a certain consul to Italy, whom she often met in society (the widow had managed an entrance to the sacred inner circle). Of course she would not speak of this to any one else—a widow had to be so careful, she was so closely watched; every little innocent word or look criticised—but it was so easy to talk to Virginia. She understood things so well. And those terrible boy babies were always willing to allow the *puter* and *mater* an evening at the opera if Virginia would come and sit with them and tell fairy tales—she knew such jolly good ones—until sweet sleep would kiss their eyelids down.

And Virginia had her dream of a fairy prince that would surely come for her some day. He would be tall, fair-haired, and with eyes as blue as the waters of lake Pontchartrain.

And he would be a goodly knight, and she would love him well.

AT A BALL.

Mardi Gras!

The little widow handed over her invitations to the ball for inspection. How pretty they were. Minnie sighed dolefully. Marian, who had a soul above such things, was supremely indifferent, but Virginia said, in a burst of confidence and with a little patient smile of resignation: "I never attended a Mardi Gras ball in my life. I'd like to go."

Dr. John looked up from his paper—looked again—cleared his throat, and then realized with a sort of shock that Virginia was not quite happy—little Virginia, whose very presence brought sunshine and laughter and joyous content.

It must not be. If Virginia wanted to attend the Mardi Gras balls, why it must be so arranged. He coughed again, folded his paper in a precise and irreproachable little fold, and then said:

"If you young ladies would like to go to the balls, I will take you with pleasure."

There was a moment of intense silence. Virginia could hardly suppress a desire to giggle. Ye gods! go to the Mardi Gras balls with Dr. John. Did any one ever hear of such a good joke? Would he wear a little blue sack coat, not thinking of full-dress rules and regulations, and forget that a carriage was one of the requisites?

But Minnie was beginning to blush and dimple all over. She realized that Dr. John was in earnest.

"Oh, how delightful!" she broke out impulsively. "Dear Dr. John, how kind of you. Will you really take us?"

A kind, warm smile lingered about the doctor's pleasant mouth, just under the fierce little red mustache.

"I will be glad to be of any service to you at any time, and certainly will arrange this little thing about the balls. Miss Virginia," he added, after a moment and a little awkwardly, "you will go too?"

"Of course I will. A real live ball! Me, Virginia Carlisle, a scion of a noble but sadly decayed race, to glory in the purple and fine linen of sweldom. I am amazed. I hardly grasp the meaning of it all. My spirit soars—to laces and ribbons, white gloves and high-heeled slippers, violets for my corsage and in my rippling hair. On! on! to conquests and the Mardi Gras balls—thanks to Dr. John."

Here she makes a deep and sweeping courtesy. The boy babies laugh and clap their fat little hands, and in the midst of it all Dr. John, absent-mindedly as usual, picks up his hat and goes out.

Such elegant costumes! Such beautiful women! The ballroom is indeed a scene long to be remembered. A scene one never forgets. How inspiring is the music! The breath of flowers floats upward, faint and sweet.

Minnie and Virginia stand by a bit awed. It is in very truth the grandest thing they have ever before witnessed. Nobody comes to them to dance just at first. A queer sort of feeling comes into both their pretty round throats. Two or three of these "real society boys" have bowed to Minnie as they pass, dancing with other girls, but have not come nearer. A lonesomeness, a horrid, shamed sort of red creeps into her satin-like cheek, while an indignant flash emits from Virginia's stars of eyes.

Just then a mild voice is saying right into her ear: "Ah, here we are. Miss Carlisle, Miss Virginia, let me introduce my friend Mr. Langdon," and Dr. John brings forward an elegant-looking gentleman, who immediately asks Minnie for the dance that is just beginning. Dr. John turns a bit red, and says, simply: "Miss Virginia, will you dance with me?"

Virginia forgets to think it queer that Dr. John can dance; that it is unusual to see him in full dress evening suit; that his mustache is red and his hair thin on the temples. She only feels a sort of fierce joy that she is no longer a poor, neglected young girl, with fast-beating heart and tears of mortification.

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40 YEARS THE STANDARD.



tion near, very near, the pretty bright eyes. How well he dances, this quiet, unassuming, short-sighted Dr. John. Who would have believed it!

Never until to-night did Virginia realize that the little doctor was, after all her jokes, a New Yorker, and a gentleman born and bred. How many people know him. She is never without a partner again. She is beginning to like it, too. These men of fashion know well how to turn a sentence gracefully. How Minnie is enjoying herself! Dancing, always dancing! Those "real society boys" are claiming a large share of her attention. Perhaps they meant to come to her all along. Perhaps her dancing with Percy Langdon, the most conservative man in town, had something to do with it. At any rate, Minnie is happy. She is "in society" for once. She is at the Krewe ball. It is all very delightful, even the ride home in the satin-cushioned carriage. Virginia looks often at Dr. John. How could she have laughed at the stoop in his shoulder or the shape of his hat?

He had never thought of these little things—they seemed of so little importance to him. He could dress as fashionably, and was quite as correct form as any other man in the ultra-elegant city. Look at him to night. How good he had been to her and Minnie. They were only two eager, innocent young girls, without money, position, or anything but their good blood and blithesome youth. Yet he had treated them with all the consideration and polite attention of a courtier—dear Dr. John!

A little new something moved in Virginia's tender bosom. Could it be a herald of the fairy prince?

And Dr. John stood for a long time at his window that evening, thinking. At last he closed the blinds and said out quite loud, and with a long, deep sigh:

"Yes, I'll go back to New York. I never thought it would come to me. I am almost forty years old; such things are for the young. She would laugh at me in her innocent girlishness. She would not understand my little Virginia. Some young, talented fellow will win her. I am only Dr. John, a plain, stupid, unattractive man, fast nearing middle age, who ought to have known better than to have cast his eyes upon the brightest, sweetest bit of womanhood God ever sent to gladden earth."

And in a few days Dr. John goes from among them; goes on his weary way, even as he came—alone!

#### AS IT ENDS.

Times became hard, harder, hardest. The widow wedded the consul to Italy, and went far across the sea. The family with the boy babies moved to the country. Other boarders fell off. The pleasant tenement house up town had to be given up. They moved way down in a dingy quarter of the town. The boarders were not as nice, the house was not as nice—and now there was so much more work to do. They only kept one girl to help. Marian, the artist and dreamer, had accepted a little country school way back in the piney woods. Minnie—pretty Minnie, who so loved the creamy froth and dainty things of life—was actually taking in sewing, stitching away on coarse garments and spoiling her corn-flower blue eyes; while Virginia—well, they only kept one girl as help—Virginia was that girl. Doing any and everything, helping in the kitchen, house, and dining-room. The mother wore a sad, harassed look. The bills kept coming in. Ah! times were cruelly hard.

There was no gentle Dr. John to pay a month's board in advance, which had made things so much easier; there was nobody to help in any way. One evening in February—just a year from the night of the Mardi Gras ball—with a feeling of desperation in her troubled heart, Virginia drew from a long concealed hiding place (she had little use for such things now, poor child) a crimson silk waist and neat black skirt. Donning them both she reached for a somewhat shabby black sailor hat and started for Canal street, "just to be a lady for once more in my life," she

whispered, with a rebellious rush of tears to the brave bright eyes.

"Oh, if Dr. John were only here! I laughed at him and was mean; that is the way I was to be punished for it all—he was to go far, far away, and he'll never know how sorry I am."

Walking forlornly along the beautiful boulevard, pausing now and then at an especially attractive show-window, and gazing therein with an almost childish delight—she had so few pretty things now. Suddenly a hand was laid very gently on her shoulder and a voice, a dear voice she had never forgotten for a single day or hour, was saying:

"Virginia! It must be Virginia; I've come back!"

And, yes, there he stood, right by her side, before a Canal street show-window—Dr. John. She turned to him, laughing and crying all at once. She was so glad and happy and rested. They took an electric car for home, and as he closed the dark, damp hall door, Dr. John took both her little trembling hands in his own firm, soft, white ones—the red silk waist and the trace of tears too often shed had done the business. The timid, little, short-sighted doctor was brave as lion now, and said:

"Virginia, I've come back. I've come back to marry you."

And what did the foolish Virginia do but throw herself into his outstretched arms and sob out:

"Oh, I'm so glad! I'm so glad. Now you've got back, Dr. John, everything will come right again."—Mary Belle Poole.

#### Gems of Thought.

Infinite toil would not enable you to sweep away a mist; but by ascending a little you may often look over it altogether. So it is with our moral improvement; we wrestle fiercely with a vicious habit, which could have no hold upon us if we ascended into a higher moral atmosphere.—Sir Arthur Helps.

The tiny ray of sunlight which stole in through the crack of the shutter yesterday wrote with its golden pen these words upon the darkness within: "There is a great big world of sunshine, just like me, outside." Don't keep sunshine barred out from your soul. Open wide the shutters. Do not interpret the meaning of life from the darkness, but from the sunshine which falls upon it. The joy of yesterday, which crept into your clouded life, points you to a world that abounds with it. The satisfaction you felt to-day, upon doing that good turn for another, was as a drop to the ocean of satisfaction you will find if you make every other day just like this.

Faithful students make faithful men. Never allow a single task to be omitted, nor a single lesson to be slighted, is what should be urged upon every boy and girl in the lower schools by all parents, and the habit of faithfulness will continue in the higher stages of education, or in business life, as the future may determine. I do not know that there is any different principle in mechanical work. Thoroughness is the quality of good workmanship. But this implies an ideal. The little book, "Hiram Golf's Religion," beautifully illustrates this principle. The inscription upon his tombstone, "Shoemaker, by the Grace of God," is a volume in itself. It turns our thought to the fact that all work has in it a divine principle, not that now of usefulness, but that of the possibility of faithfulness. Faithfulness thus illustrated takes all work into the range of heavenly capacities and heavenly qualities. Here it finds the true dignity of labor. It shades by imperceptible degrees all service into Christian work and devotion.—Rev. A. H. Quint.

A witty member of our Unitarian fellowship was introduced one day to a Churchman of the stricter sort, who inquired: "Did you say you were a Unitarian? Ah! well, then, I can recognize you as a gentleman, but not as a fellow-Christian." "Oh, never mind about that," was the breezy reply: "I can recognize you as a fellow-Christian, but not as a gentleman!"—Pacific Unitarian.

#### Fashion Notes.

The black silk gown has become once more an important item in my lady's wardrobe. But now the sombre black is relieved by pretty ribbon and lace berthas, or some gay arrangement of silk and chiffon.

The average tea gowns are made of soft pretty shades of cashmere combined with silk, figured surah being the most popular. House gowns are receiving much attention. There are the five o'clock tea gowns, which are very handsome and elaborate, also the simple tea gown and the breakfast gown, which is much plainer, but very graceful.

A few sleeve models show some of the eccentric developments of this overwrought portion of the costume, and are quite convincing as to its fantastic possibilities. Two and sometimes three materials are used in their construction.

Absolutely new fashions are not in evidence yet except as they are suggestively displayed by the gradual opening of spring novelties, and it is impossible to arrive at any definite conclusions as to what changes there will be in the fashioning of garments. The general lines of dress bid fair to remain about the same, with very full, plain skirts, full waists and sleeves of varying degrees of expansion. The last show a tendency to reduce their fullness when the material is heavy. But so many of the spring goods are extremely light in weight that the sleeves may not show any perceptible difference.

The new wool goods are rough in finish, loosely woven and charmingly mixed with two or three colorings. There are checks, stripes and every variety of boucle effects, and, as usual in spring, green seems to be the dominating color, with dull red, brown, tan-gray and bluet blue following in the lead.

All these loosely-woven goods require a silk lining to make them up to date, and this must be of some contrasting color that will show through the meshes. Bright linings are to be a feature of the new spring gowns, and much of the artistic effect will depend on an occasional glimpse of the showy lining of the otherwise unpretentious skirt.

#### Pleasantries.

Waiter (to gentleman who is looking at napkin half full of holes): "I'll bring you another napkin." Diner: "Never mind. The holes seem to be clean."—Tit-Bits.

Where and How.—Willie: "Tommy Jones went and hit me an awful crack with an apple." Papa: "On purpose?" Willie: "No, on the nose."—Harper's Young People.

Shippen Clerk (to his employer, leaving the office): "Oh, Mr. System! Haven't you forgotten your umbrella? It's raining." Mr. System: "Can't help it. I have made a resolution to have one here and one at home, to provide for all emergencies. Now, if I take this they'll both be at home."

"Well," said Mrs. Bruggins, after a solo by a fashionable church choir tenor, "if that ain't the rudest thing I ever saw!" "What?" inquired her niece. "Why didn't you notice it? Just as soon as the young man began to sing, every other member of the choir stopped; but he went right through with it, and I must say I admire his spunk."—Washington Star.

#### DOMESTIC ECONOMY.

##### Domestic Hints.

**MILK PORRIDGE.**—Mix one tablespoon of flour to a paste with cold water, stir it into one-half a pint of boiling water and let it boil twenty minutes. Then add a teacupful of milk and a pinch of salt. Let it boil up and serve.

**FRENCH PANCAKES.**—One-half cup of sour milk, small half teaspoonful of soda, one egg, a pinch of salt, and flour to make a thin batter. Bake on a griddle in large cakes. Spread with butter and current jelly, and roll them up nicely. Spread sugar over them if you please.

**SCALLOPED TOMATOES.**—Take one quart can of tomatoes and season with one teaspoonful of salt, half a teaspoonful of pepper, a teaspoonful each of sugar and onion juice, one heaping tablespoonful of minced parsley and a tablespoonful of butter. Butter a deep dish and sprinkle with fine crumbs. Pour in the tomatoes, cover the top with fine bread crumbs and bits of butter. Bake in a moderate oven an hour and a half to two hours.

**A NICE WAY TO WARM OVER REMNANT OF HAM.**—Chop the meat fine, being careful to remove any pieces of gristle and fat. Put a tablespoonful of butter into a saucepan, when hot add a tablespoonful of flour, cook until smooth but not brown, add gradually a cup of rich milk, stirring constantly, add the chopped ham, seasoned highly with red pepper and a little salt. Let the meat get thoroughly hot and serve. The beaten yolks of two eggs may be added, and makes a pleasant variety.

**APPLE TAPIOCA.**—Fill a two-quart pudding dish two-thirds full of apples, pared, cored and quartered. Sprinkle over them a little salt, sugar and nutmeg. Take one cup of pearl tapioca, cover with cold water and let it soak two hours. If too thick add a little hot water, put the dish of tapioca into a vessel containing hot water, and let it boil until thoroughly dissolved. Then pour in while hot over the apples, add a little more seasoning and bits of butter. Bake till the apples are tender. Pierce the apples with a fork, and if tender remove from the oven and serve hot, with cream and sugar. Fresh peaches or pears used in the place of apples are delicious.

##### Curious Facts.

According to an exchange, the bulk of fine gloves made in Russia are made from foal skins, an industry in which Russian workmen excel. They are generally cut and sewed by hand. Out of 500 skins from 1200 to 1500 gloves of the best quality can be made.

A scientific experiment once drew out from the body of a single spider 3480 yards of thread or spider silk—a length little short of two miles. Silk may be woven of spider's thread, and it is more glossy brilliant than that of the silkworm, being of a golden color.

A man who lives to the limit of three-score years and ten, if in fair health and of average appetite, will have eaten in that time about 13,000 pounds of meat, about 10,000 pounds of bread and vegetables, about 25,000 eggs and 5000 pounds of fish, chicken and game. He will also have consumed about 12,000 gallons of various fluids, or enough to make a lake covering four blocks in extent and two feet deep. In other words, he will have eaten fourteen tons of solid and drank three hundred barrels of liquid refreshments.

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### Formation of the Rings of Wood in Trees.

The many differences of opinion that even eminent men are presumed to hold in regard to the character of the so-called annual rings of trees, would be readily reconciled if a little thought were given to the manner in which wood is formed as the trunk is enlarged. This is accomplished by the birth of new cells, which proceed laterally from the old ones. The new course of cells take their place around the mother cells, and form a thin layer over them, just as a sheet of writing paper might be wrapped around another. These in a few days again become mother cells, and another course is produced. This continues during the short time devoted to the growth, perhaps a dozen times, and the mass of new wood known as the new annual layer is really made up of a dozen fine layers so small that the concentric lines are only visible by means of a powerful microscope. Now the size of these cells depends on the amount of material at command.

The original mother cell that starts the annual growth has had the advantage of the best opportunities for stored nutrition; every successive addition is weaker and weaker, until the last growths of the season are very small. It is because they are so small and packed close together that we can readily see where they end, and thus detect the extent of the annual layer even in old trees. Now a tree may be in a position to have command over a superior stock of nutrition, and the cells are in a condition to avail themselves of the advantages, especially if the cells are naturally of a large size, as they are in some trees. In the European silver linden, for instance, the cells are one-fourth larger than they are in the common American linden; and in this and similar trees, a number of light rings can usually be traced in the annual increment. The same can often be seen in vigorous specimens of the cottonwood.

But plainly as these lines may be seen, the experienced investigator can rarely be mistaken on the last line made during the growing season, and is able to tell how many years the tree has been growing on the spot where it stands. There is nothing more certain than that in the hand of an expert the age of a tree can be determined by its annual growths.

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#### A Pertinent Paragraph.

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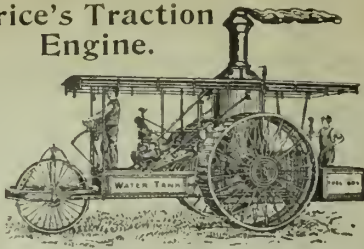
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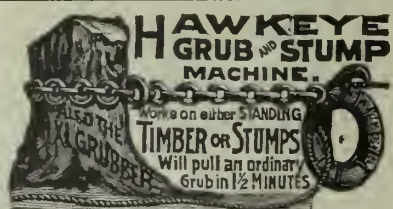
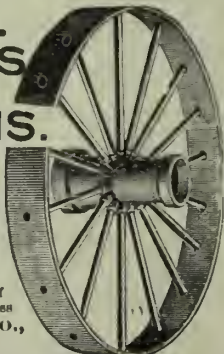


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Fine, luxuriant pastures and rich meadows, producing tremendous hay yields (4 to 6 tons per acre), are now made possible on every soil, in every climate, by sowing our Extra Grass and Clover Mixtures. You won't need to wait a lifetime for a good start of grass, for we have grasses, which, if sown in April, will produce a round crop in July. Pamphlet on Grass Culture, etc., 2 cents postage. Salzer's Extra Mixtures can be obtained only from us, although lots of seedmen are copying our description, etc., but they haven't our live seeds.

**\$300 FOR A NEW OAT NAME.**  
That is what we pay for a suitable name to our new Oats, yielding, with 500 farmers, 200 bushels per acre. It is wonderful!

We are among the largest growers of farm seeds in the world, and carry great stocks of Wheat, Barley, Peas, Corn, Oats, Potatoes, etc. Potatoes at \$2.50 per bbl. and up, yielding, as the "Rural New Yorker" says, 542 bushels per acre. 1,000,000 ROSES, Plants and Small Fruits, Strawberries, Apples, etc.

**EARLIEST VEGETABLES IN THE WORLD.**  
Splendid sorts, fine yields. Onion Seed only \$1 per lb. 65 pkgs Earliest Vegetables, \$1, postpaid. 10 pkgs. Flower Seeds, 25c. Everything at hard-time prices. Wholesale Market Gardener's List, 2c. Our Seed Book, 144 pages, and sample Meadow Grass Mixture, 7c. Seed Book and sample pkg. 14-Day Radish, 6c. Seed Book alone, free for 5c. postage. Try the Great Giant Spurry.

JOHN A. SALZER SEED CO., LA CROSSE, WIS.

## PLANTS

Strawberry, Blackberry, Currant, Gooseberry, Asparagus and Grape Plants. Pear, Apple, Peach, Chestnut, Walnut.

Send for ARTHUR J. COLLINS, Moorestown, New Jersey.

## TREES



## Canadian Lumber.

Canadian lumber resources will undergo a very exhausting drain during this year and next. The present tariff system of the United States admits lumber free, but, as this tariff is exceedingly unpopular, and as the voters of the Republic in November last pronounced against it in unmistakable terms, it is taken for granted that it will be in operation only until 1897 at the furthest. Acting on this belief, all Americans owning wooded lands in Canada will do all that lies in their power to strip those lands before a new tariff shall be enacted that shall place a duty on imported lumber. They will strain every nerve to rush their Canadian trees into lumber, and to rush the lumber over the border. In this they will be imitated by the Canadians who own wooded lands. All of them will hasten to take advantage of the free markets here. The result will probably be a larger inroad into the forests of Canada during 1895, 1896 and 1897 than was ever before made in three years. The movement will send a good amount of money into Canada, to be sure, but the money will hardly offset the loss of forested area, and the percentage of it that may be classed as profit will actually be very small. Some Canadians, having an eye to the future, do not like the situation at all. They in reality consider the destruction of the Canadian forests an unmixed evil. On this side of the border the movement will work a present financial and industrial hardship, but in the broader sense it will be a benefit to the United States. The great cut for the next three years in Canada will be made on all the most accessible forest tracts, and, after those tracts are cleared, there will be an increase in the cost of Canadian lumber, by reason of greater expense necessary to move it from the remoter tracts to the shipping points. American owners of Canadian limits are slashing right and left, and when, at the end of the free-lumber period, they lay down their axes, they will have converted many square miles of forest into stumpy, chip-covered wastes, on which great fires will feed. Canada has got a free-lumber market now in the United States, but it will in the end prove to be a dear investment for Canada.—The Lumber World.

## What a Man's Life is Worth.

Decisions in two damage suits against the Ann Arbor railway for the deaths of William Beaulien and George Alberts, employees of the road, were rendered at Toledo, Ohio, last week, by Judge Ricks. They are of unusual importance because of determining the maximum sum to be recovered in federal courts in cases of this kind. Judge Ricks said: "One of the most difficult questions for a court to determine is for a correct and just measure for damages in a case of this kind. It is hard to say that a human life is not worth such a sum as the master has given in this cause, because the records show these men were of excellent habits, fond and affectionate husbands and in every way a help and comfort to their families and useful to the public. In a large number of States where the limit for the loss of life has been fixed by the Legislature, the sum of \$10,000 has been fixed as the maximum allowance to be made. This is a legislative construction of a fair maximum sum to be awarded in such case. I think the court may properly, therefore, accept this concordant judgment of so many different State Legislatures as justifying it in saying that the maximum ought not in any one of these cases to exceed that sum."

The statement that a child five and one-half years of age would not have more than 150 words in its vocabulary that it was able to use understandingly led a careful mother to note for a month the number of words used by her child. All the parts of speech used were recorded, with the result that in this case the child appeared to have a vocabulary of 1528 words.

# St. Jacobs Oil

THE GREAT REMEDY

CURES PAINS OF MAN & BEAST



WAUKEGAN CHIEF.

## WAUKEGAN BARBED WIRE.

Weight per Rod,  
Not Price per Pound.  
Makes the Cheap Fence.

100 Rods of Waukegan  
Weigh only 90 Pounds.

## WASHBURN & MOEN MFG. CO.

SOLE MANUFACTURERS.

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## Cover Your Barns,

OUTHOUSES, SHEDS AND DWELLINGS WITH  
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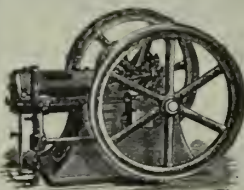
# Water Pipe

For Irrigation, Hydraulic Mining, Mills and Power Plants.

IRON, CUT, PUNCHED AND FORMED, AND TOOLS SUPPLIED FOR MAKING PIPE ON THE GROUND WHERE REQUIRED.

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Simplest and most economical engines on earth.

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Requires only a few minutes' attention a day. Guaranteed cost of running, 1 cent per hour per H. P.

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FOR TOWN WATER WORKS.

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130 BEALE STREET, SAN FRANCISCO, CAL.  
Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.

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Trade Mark—Dr. A. Owen

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The latest and only scientific and practical Electric Belt made, for general use, producing a genuine current of Electricity, for the cure of disease, that can be readily felt and regulated both in quantity and power, and applied to any part of the body. It can be worn at any time during working hours or sleep, and

### WILL POSITIVELY CURE

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AND FUNCTIONAL DERANGEMENTS

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Electricity, properly applied, is fast taking the place of drugs for all Nervous, Rheumatic, Kidney and Urinal Troubles, and will effect cures in seemingly hopeless cases where every other known means has failed. Any sluggish, weak or diseased organ may by this means be roused to healthy activity before it is too late. Leading medical men use and recommend the Owen Belt in their practice.

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Capital Paid Up.....\$1,000,000  
Reserve Fund and Undivided Profits, 130,000  
Dividends Paid to Stockholders.... 832,000

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It has no equal as a light reflector for light-shafts and out-wards of large buildings. It is supplied in a thick paste, to be diluted with cold water. It is made in white and several colors.

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It will not rub or scale, soften or darken with age, and works well over old whitewash. A dry powder to be mixed with cold water.

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A Department of Electrical Engineering Has been established under a thoroughly qualified instructor. The course is thoroughly practical. Send for Circular. C. S. HALEY, Sec.



S. F. MARKET REPORT.

Market Review.

SAN FRANCISCO, March 20, 1895.

**WHEAT**—There is a good demand for shipping purposes, with fairly active trading as a necessary result. Prices, however, lack strength, and the situation is against sellers. Exporters will not pay over 85c to-day as a full figure for No. 1 shipping, while 85½c is given for parcels of extra choice quality. Milling grades change hands at a range of 90@95c per cwt.

**BARLEY**—Business is anything but brisk in the sample market, while transactions in speculative circles are only of moderate volume. The weather is favorable for the growing crops, and operators are not disposed to take any great chances by buying heavily under existing circumstances. We quote: Feed, fair to good, 77½@78½c; choice, 80c; Brewing, 85@90c per cwt.

**OATS**—Arrivals so far this week have been light, footing up about 4000 cwt. Dealers are well stocked up, however, and able to satisfy much greater trade than prevails just at the moment. Prices are steady without being buoyant. We quote: Milling, \$1 07½@1 17½; Surprise, \$1 07½@1 17½; fancy feed, \$1 02½@1 07½; good to choice, 95c@1; fair to good, 90@95c; poor to fair, 85@87½c; Black, \$1 10@1 17½; Red, \$1 10@1 20; Gray, 95c@1 per cwt.

**HAY**—The market shows a little stronger tone. Besides a fair local demand, there are some shipping orders being filled which help to impart more activity to the situation. We quote: Wheat, \$8 50@12; Wheat and Oat, \$8@11 50; Oat, \$9@11; Alfalfa, \$8@9; Barley, \$8@10; Clover, \$8 50@9 50; Compressed, \$8 50@10 50; Stock, \$6@7 per ton.

**STRAW**—Quotable at 70@80c per bale.

**FEED**—Manhattan Horse Food (Red Ball Brand) in 100-lb. cabinets, \$8; Manhattan Egg Food, 100-lb. bags, \$11 50.

**POTATOES**—Desirable qualities are steady in price. We quote: Early Rose, 40@50c; River Reds, 30@30c; Burbanks, 45@50c; Oregon Burbanks, 45@90c; Salinas Burbanks, 75c@1; Sweets, 75c@1 for Rivers and \$1 50@1 75 per cwt for choice stock.

**ONIONS**—From 75c to \$1 25 per cwt is about the range for fair to choice stock, offerings being more free.

**FRESH FRUIT**—There is a firm holding of Apples that are faultless, and full prices are insisted on for such stock. Common grades are plentiful and slow of sale. Apples, 50c@1 per box, with \$1 25@1 50 for fancy.

**CITRUS FRUIT**—Quotations for Oranges are not strong, the market being rather well supplied at the moment. Seven carloads came in yesterday morning. We quote: California Navels, \$1 50@2 75; Seedlings, 75c@1 60 per box; Mexican Limes, \$5 50@6 per box; Lemons, Sicily, \$3@4; California Lemons, \$1 50@2 for common and \$2 25@3 for good to choice.

**DRIED FRUIT**—More interest is being taken in the situation by the trade generally. Regular sessions are held daily in the rooms of the San Francisco Fruit Exchange, at which there is a large assemblage of dealers. Samples are submitted, sales are negotiated, and all incidental matters are discussed with a view of promoting the Dried Fruit industry.

Frost this week has caused more or less damage to growing crops, and shipments of early fruits from some sections are not likely to be as large this season as usual.

Following are the prices furnished by the Fruit Exchange. The figures presented represent carload lots, small parcels occasionally selling at slightly lower rates:

Apricots—Fancy Moorpark, 8c; choice, do, 7½c; fancy, 7c; choice, 6c; standard, 5½c; prime, 5c.  
Apples—Evaporated, 5½@7c; sun-dried, 4@5c.  
Peaches—Fancy, 7c; choice, 6½c; standard, 5½c; prime, 5½c; peeled, in boxes, 12@13c.  
Pears—Fancy, halves, 5½c; quarters, 4½c; choice, 4½c; standard, 3½c; prime, 3c.  
Plums—Pitted, 4@5c; unpitted, 1½@2c.  
Prunes—Four sizes, 4½@4¾c.  
Nectarines—Fancy, 7c; choice, 6½c; standard, 6c; prime, 5½c.  
Figs—White, choice, 4@5c; Black, choice, 2@2½c.  
Raisins—In sacks (50-lb. boxes selling at ¼c per lb. higher): 4-crown, loose, 4c; 3-crown, 2½c; 2-crown, 2c; seedless Sultanias, 3c; seedless Muscatels, 2c per lb; 3-crown London Layers, \$1 25 per box in 20-lb. boxes; clusters, \$1 50; Dehesa clusters, \$2; Imperial clusters, \$3; 4-crown, loose, \$1 15; 4-crown, loose, faced, \$1 25 per box.  
Dried Grapes—1½c per lb.

**HOPS**—There is nothing of interest in the situation. Offerings are not large, but the demand is slow and there is more than enough stock to meet all current wants. Quotable at 5@7½c per lb, as to quality.

**HONEY**—Market quiet, with prices easy. We quote: Comb, 10@12c; water white extracted, 7c; light amber extracted, 5½@6c; dark amber, 5@5½c per lb.

**BUTTER**—Local trade is good, while some little shipping movement is in progress. At the same time prices are weak, the supply being in excess of the demand.  
Creamery—Fancy, 14½@15c; seconds, 13@14c per lb.  
Dairy—Fancy, 12½@13c; good to choice, 11@12c; fair, 9@10c; store lots, 7@8c.

**CHEESE**—Stocks large, with demand moderate. We quote: Choice to fancy, 7@8c; fair to good, 4½@6c; Eastern, ordinary to fine, 10@14c per lb.

**EGGS**—No change, though there is steadier feeling to the market. Quotable at 11@13c per doz.

**POULTRY**—The market shows improving tone, Hen Chickens alone being weak in price. A carload of Eastern is expected this afternoon. We quote as follows: Live Turkeys—Gobblers, 10@11c; Hens, 10@12c per lb; dressed Turkeys, 11@14c per lb; Roosters, \$1@5 for old, and \$6 50@8 for young; Broilers, \$3@4 50 for small and \$4 50@5 50 for large; Fryers, \$6@7; Hens, \$4 50@5 50; Ducks, \$5@7; Geese, \$1 25@1 75 per pair; Pigeons, \$1 50@2 per dozen.

**WOOL**—Trade is somewhat dull at the moment, though activity will necessarily develop as soon as receipts of spring clip are large enough to admit of general bartering. The weekly report of Thos. Denigan, Son & Co. says: "There is still quite a large line of unsold Fall Wools in the market. There is also a much larger stock of unsold scoured Wool on our market than we have had at any former early spring. Shearing has commenced down south, chiefly at Bakersfield and Delano, where the clipping will be year's Wool chiefly. So far, no prices have been established for these kinds; but as they are very shrunky, and as they will not bring over 25c per scoured pound for the best sort, it can be seen that the grease price will have to be very low." We quote Spring: San Joaquin, year's staple, per lb. 4@7c Do, seven months 4@7c Calaveras and Foothill 5@8

We quote Fall:  
Free Northern 7 @ 8½c  
Northern, defective 5 @ 7  
Southern & San Joaquin, light and free 5 @ 6  
Do, defective 3 @ 4

guess who

has a right to make use of this expression—

WHAT WE SAY WE DO WE DO DO

a pointer

the oldest, biggest and best manufacturers of harvesting machinery in the world.

See next issue for explanation.

Destroy the Gophers!

You may now grow alfalfa on the uplands and save garden, trees and flowers.

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**WHEELER'S CARBON BISULPHIDE,**

Utah and Alameda Sts., San Francisco.

**WOVEN WIRE FENCE**

Horse high, bull strong, pig and chicken tight. Make it yourself for 13 to 20 cents.

50 styles. A man and boy can make 40 to 60 rods a day. Catalog free.

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**LARGEST**

All kinds of tools. Fortune for the driller by using our Adamantine process; can take a core. Perfected Economical Artesian Pumping Rigs to work by Steam, Air, etc. Let us help you. **THE AMERICAN WELL WORKS,** Aurora, Ill.; Chicago, Ill.; Dallas, Tex.

**STUMP PULLERS**

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**16 & 18 DRUMM ST. S.F.**



AFTER THE BATTLE.

Did you hear what happened out at Rockford? There was a great national dairy convention, and samples of butter by the hundred, in competition.

THE SHARPLES RUSSIAN SEPARATOR

Made the butter that took the highest prize. It also made the butter that took all the other prizes. It was a clean sweep for the Sharples separators.

THE BOWL ALONE REVOLVES.

No stronger argument can be used in favor of these Russians than the fact that more of them are being sold in the great Elgin district than of all others combined. That's the way the Elgin people endorse them.

HERE'S A LETTER FROM IOWA:

SAND SPRINGS, IOWA, April 4, 1894.  
P. M. SHARPLES:—I set up four of your Imperial Russian Separators, Sept. 22, 1893, and have run them every day since.  
The average cost of repairs and oil for each machine for the six months amounts to \$1.40. They do the best work, and are the easiest machine to handle I ever saw.  
I skimmed 10,000 pounds of milk with fifty-two cents worth of soft wood, and run a ten-horse power engine for five hours. The cream leaves the machine from four to six degrees cooler than the ingoing milk.  
I skim 8000 pounds an hour with the four machines and only a trace of fat can be found on the skim milk. The Imperial saves butter fat, oil, fuel, trouble with the belts, buying repairs, and saves the proprietor enough in a short time to throw away his old machine and put in an Imperial.  
W. R. CRABB, Buttermaker.  
For Sand Springs Co-operative Creamery Co.

Send for circulars and please mention this paper.

Baker & Hamilton,

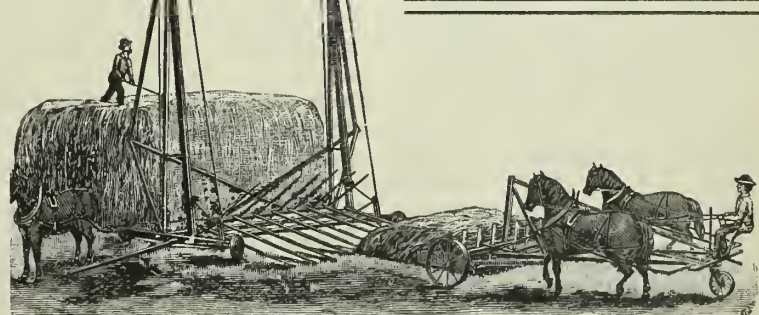
Sole Pacific Coast Agents,

SAN FRANCISCO. SACRAMENTO. LOS ANGELES. NEW YORK.

WRITE FOR CATALOGUE:

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These Stackers and Rakes are California made and are specially adapted to the Pacific Coast.



Jackson's Improved "Eclipse" Stacker and "Acme" Rake.

**NOTICE.**—We have discontinued our Sole Agency for the "Eclipse" Stacker and "Acme" Rake, heretofore controlled by the Deere Implement Company, of San Francisco; and they will no longer represent us.  
Henceforth we will supply these Stackers and Rakes direct to the trade. We carry a large stock on hand; and all orders will receive prompt attention. Send your orders direct to us, or through your local dealer.  
**WARNING.**—These Stackers and Rakes are fully protected by Letters Patent. BEWARE of infringements, and inferior, imported machines.

Byron Jackson Machine Works,

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Protect Your Trees

—WITH—

Gilman's Patent Tule Tree Protector.

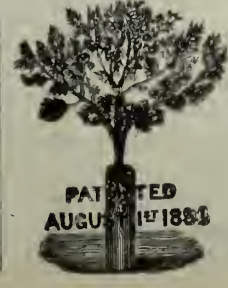
PATENTED AUGUST 1, 1893.

**FIRST PRIZE**—Medal and Diploma—California Mid-Winter International Exposition.  
Cheapest, best and only one to protect trees and vines from frost, sunburn, rabbits, squirrels, borers and other tree pests.  
For testimonials from parties who are using them, send for descriptive circulars.

B. F. GILMAN,

Sole Manufacturer of Patent Tule Covers.

420 Ninth Street, San Francisco, Cal.

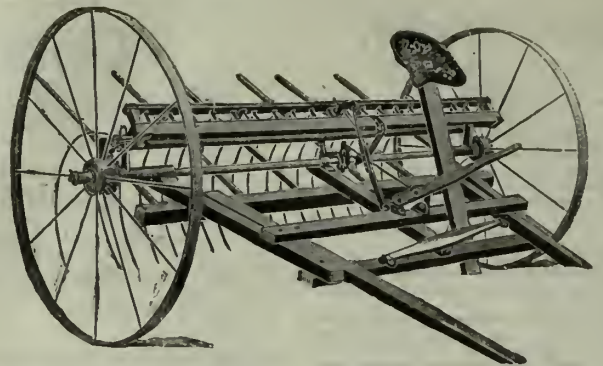
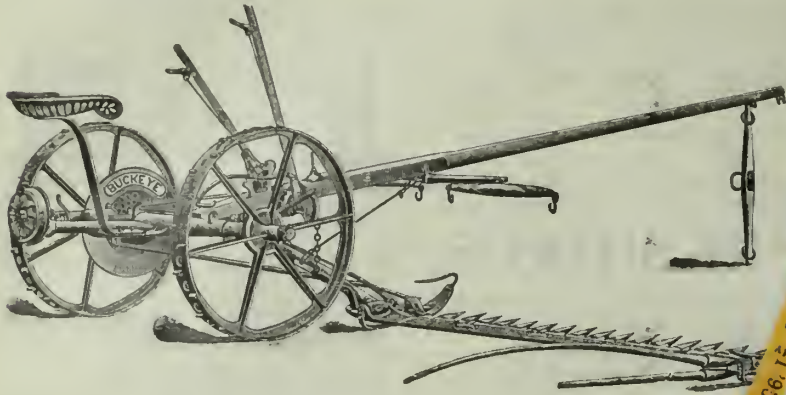




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is undoubtedly the best mower made, and HOOKER & CO., San Francisco, are the sole agents for the same in California.

was named after the Buckeye State by its inventor, LEWIS MILLER, a native of the Buckeye State. The Original Buckeye Mower is made at the great Buckeye Factory at Akron, Ohio, and at no other place in the world. It has the largest sale of any high class mower, and



The New Self-Dump Hollingsworth Rake, 8 or 10 Feet.  
THE BEST SELF-DUMP RAKE MADE.

|                                              |                |
|----------------------------------------------|----------------|
| The Genuine Buckeye Mower, 4 foot 3 inch cut | Price, \$70.00 |
| The Genuine Buckeye Mower, 4 foot 6 inch cut | Price, 70.00   |
| The Genuine Buckeye Mower, 5 foot cut        | Price, 75.00   |
| The Genuine Buckeye Mower, 6 foot cut        | Price, 80.00   |

READ THIS AND SEE HOW TWELVE BUCKEYES, DOING HARD WORK EIGHT MONTHS IN THE YEAR, BEHAVE THEMSELVES.

THE MILLER & LUX RANCHO, FIREBAUGHS, CAL., NOV. 30, 1894.  
MESSRS. HOOKER & CO., San Francisco, Cal.  
DEAR SIR:—The Original Buckeye Mower merits words of praise. On this Rancho we use twelve machines, which are in almost constant use from seven to eight months of the year, cutting the several crops of alfalfa. These mowers are put to a very severe test by being run so continuously and on extremely rough ground and through ditches partially filled with water. We have tried nearly all the leading makes of Mowers, but I pronounce the Buckeye superior to all others in ease of draft, strength and cutting qualities. The Buckeye costs us less for repairs than any other machine we have ever had on the Rancho. Yours truly,  
J. W. SCHMITZ, Supt. Miller & Lux Rancho.

It is the lightest, strongest, and without exception the best Mower in the world.



## Union Cycles.

CRACKJACKS RIDE UNIONS. All Light Weights. The Most Noted Wheel made in the United States. Try and secure the Agency.

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## Have You Seen Our Rushford Hollow Axle Farm Wagon.

It is the Lightest Running and Strongest Wagon in the World—Guaranteed.

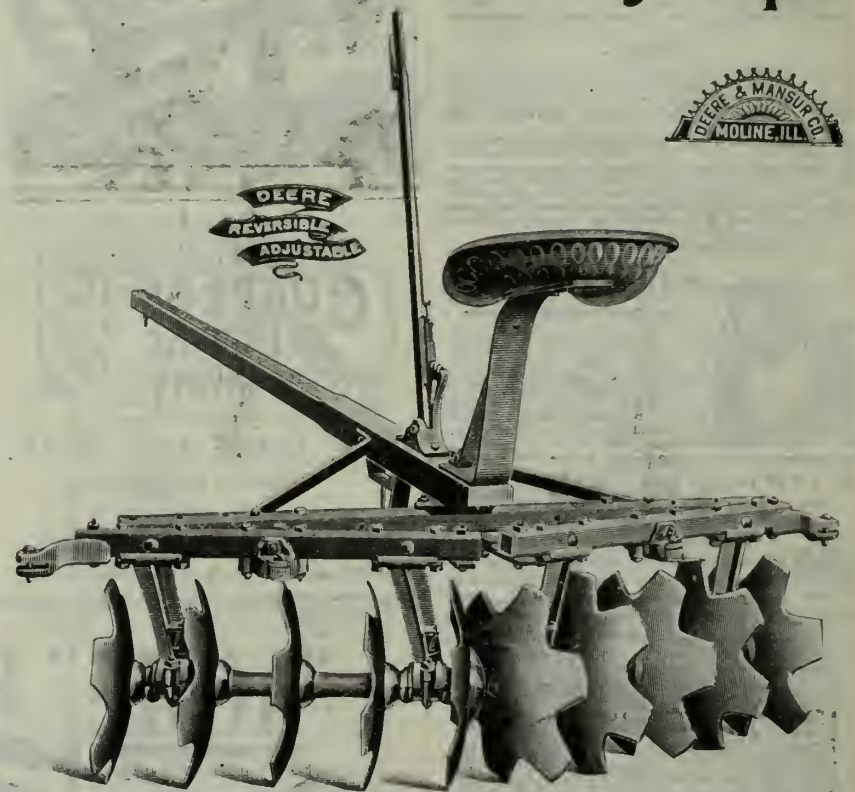
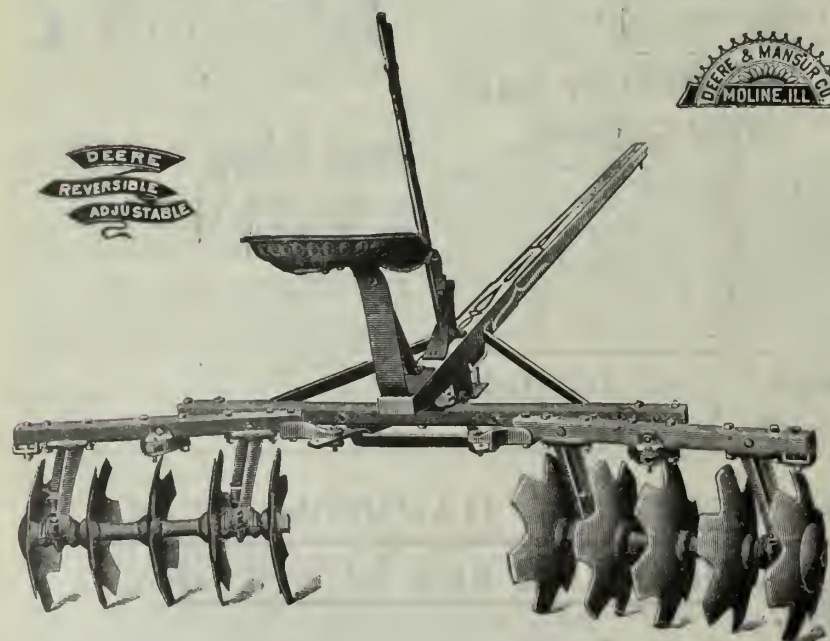
Farming Implements in Great Variety. Vehicles of Every Description.

Send for our No. 19 Catalogue. Just issued.

HOOKER & CO., 16 & 18 DRUMM ST., SAN FRANCISCO, CAL.

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Write for Circular and Price List.



“Deere” Steel Frame Adjustable and Reversible Disc Harrow.

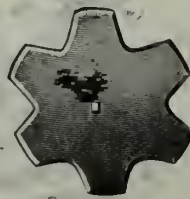
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ANY STYLE OF DISC.

DEERE IMPLEMENT CO., 305 & 307 Market St., San Francisco.





# THE PACIFIC RURAL PRESS

AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 13.

SAN FRANCISCO, SATURDAY, MARCH 30, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

## Wheat Outlook.

When it is currently reported that a prominent interior miller offers a large wager that we will purchase wheat before long at 50 cts. per ctl., it naturally has a depressing effect upon those who now have wheat in the ground and are looking for better times. We hardly think a man, even if he believes that wheat may go so low, should make such an announcement as he is credited with, because of its depressing effect upon people who have suffered enough without this additional gloom. In the nature of things any such drop in values cannot be foreseen and all ordinary courses of affairs would pronounce such a drop impossible. As a matter of fact there is abundant reason to think that wheat will not take a downward direction. There is certainly less wheat in existence now than for a long time.

We have just received the Government's wheat report, dated at Washington on March 12th, which states that the estimated amount of wheat in farmers' hands is, in round numbers, 75,000,000 bushels, or 16.3 per cent of the crop of 1894. This is 39,000,000 bushels less than was reported in farmers' hands at the same date last year. The explanation of this exhaustion of farm reserves is in large measure to be found in the fact that great quantities have been fed to hogs and other stock. Returns from North and South Dakota indicate unprecedented exhaustion of last year's crop, correspondents in many counties reporting not enough on hand for spring seed and the necessary food supply.

This shows that there is no great accumulation of wheat in this country. In the same line is a circular we have just received from Charles L. Hyde, of Pierre, South Dakota. Mr. Hyde figures:

|                                              |             |
|----------------------------------------------|-------------|
| Wheat in the visible March 1st.              | 78,000,000  |
| Wheat in second hands not in the visible     | 25,000,000  |
| Wheat in farmers' hands                      | 85,000,000  |
| Total supply                                 | 188,000,000 |
| Amount for food for four months to July 1st. | 100,000,000 |
| Amount needed for spring seeding, 1895.      | 18,000,000  |
| Amount for live stock feeding, four months.  | 10,000,000  |
| Amount probable exports, four months.        | 40,000,000  |
| Total needs.                                 | 174,000,000 |

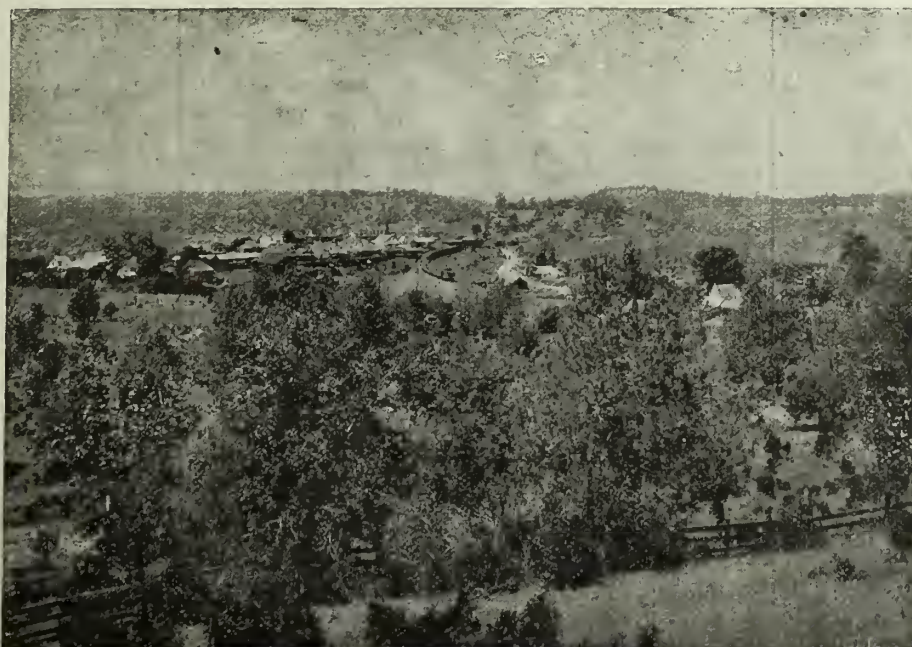
Balance for all supplies, visible, private warehouses and farmers' hands July 1st, 14,000,000. It hardly seems possible that supplies would become so reduced; but allowing 15,000,000 bushels to be taken from the exports and food requirements, and we have but 29,000,000 for all supplies. On the other hand, many believe that Europe will need from 50,000,000 to 60,000,000 from America during the next four months.

Mr. Hyde proceeds to show that the condition of supplies in March, 1891, was very similar to the present time. There was then reported as in farmers' hands 112,000,000, and 53,000,000 bushels were marketed at terminal points from March 1st to

July 1st, 1891. The visible at that date got down to 13,000,000—about the lowest for the last decade. That year, in April, 1891, wheat sold in Chicago for \$1.16 per bushel, and in the face of the biggest prospective crop we had ever produced. Mr. Hyde concludes that it surely seems that the present supply would warrant prices at least 30 cents more per bushel for wheat than it is now bringing. It is quite likely that it would be much higher if it were not for the successful efforts at short selling by a few large



ON THE ROAD TO NEWCASTLE.



NEWCASTLE, THE GREAT FRUIT CENTER OF THE FOOTHILLS.

speculators in Chicago, who have become wealthy in that line during the last three years. We hope that the California miller who is willing to bet that wheat will go down to 50 cents per cental is not actuated by Chicago motives.

A SPECIAL TRAIN loaded entirely with potatoes left Spokane on Tuesday for St. Louis, on express time. It was made up of early varieties for seed use. Another special shipment of ten carloads was expected to follow in a few days to Minneapolis.

THE Utah Sugar Company has contracted for 3300 acres of beets.

## In the Foothills.

Our illustrations this week present characteristic scenes in the newer life of the foothills of the Sierra Nevada. They are not the most striking perhaps, for they do not include orchard improvements; but we have given such features in former issues of the RURAL. One of the pictures shows a piece of road on the approach to the thriving town of Newcastle and the other presents a distant view of that town,

which has of late years become famous wherever California fruits or the reputation of them have gone. The picture gives some idea of the importance of the local fruit-shipping business, for among the most prominent buildings shown are the large packing-houses which extend along the line of the overland railway. These are of such size and number that they alone would indicate to the passing traveler the extent and importance of the fruit industries of that favored region of the foothills; but the traveler sees very much more than the commercial insignia of the industry. The train whirled him through many hundreds of acres of beautifully kept orchards, the glorious green of the foliage contrasting well with the peculiar red soil on which they stand—a soil which shows on its face its warmth and vigor and, in the growth of tree and fruit which it supports, its richness and productive value. It is only seldom in that region that the traveler along the highway traverses a roadway still in primeval solitude, as shown by the upper picture. Usually orchards glide down to the level of the highway or they are perched above and cast their grateful shade down the bluff formed by the cutting of the road to an easier grade. One who is accustomed to valley orchards with their level expanses is surprised at the unexpected angles at which he looks up or down at fruit-laden trees in the foothills. The slopes almost everywhere are occupied, and it is these slopes which give the region its early ripening fruits and which grant its escape from the frosts which afflict flat areas—an escape which this year gives the foothill growers much occasion for rejoicing. The development of the fruit industries of the foot-

hills along the overland railway is bringing new life and vigor to all the interests of the region. Improvements are seen on every side, the towns are not only growing but are improving in every way, the rural residences reflect the taste and means of those who have come to engage in the charming occupation of fruit growing or to build villas where they can dwell in comfort and, from shaded piazzas, watch the labors of others. The educational facilities of the region are also constantly extending and improving. For their advancing social and industrial activeness the foothills are now winning notice and favor for their picturesqueness and salubrity.



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ALFRED HOLMAN, Editor.  
E. J. WICKSON, Special Contributor.

San Francisco, March 30, 1895.

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## The Week.

### Weather and Crops.

The weather during the week has been generally favorable for the progress of crops. Some rains have fallen, usually enough to loosen the crust and help the grain. Some drier regions would be now much benefited by a few showers, and if indications are anything they will get them before long. We have had quite a dry March for a wet year, and some concern is being felt as to what April will be. The spring rain, which will make the crop, must evidently come in April this year, for March did not bring it. Records for twenty years back show that April is a very flighty month. It has passed with only one-tenth of an inch of rain, and it has brought in one year over ten inches in San Francisco, and over fourteen inches in Sacramento. The average April rainfall is a little over two inches. We can get along very well with that amount this year, if it is well spread around the month and the country. Sergt. Barwick, Director of the State Weather Service, calls upon his correspondents to resume their important work on April 14th. All who will enroll under him for volunteer service are invited to correspond with the Director at Sacramento.

### Oranges in

California oranges have gone to the far East this year as never before, and have won much praise

### New York

and patronage. This week it seems that too many have reached that point, for the telegraph says that the local market is glutted, some twenty-five or thirty carloads, of 300 boxes each, having arrived during the week. The fruit is described by Eastern writers as "large and fine looking Navel oranges in boxes containing from 150 to 220 each, and were sold for \$2.85 to \$3 a box. These prices are below the cost of the fruit with freight charges, etc., added." A steady stream of oranges is pouring in from California and Jamaica, while large shipments of Mediterranean oranges and lemons are on the way to Atlantic ports.

### Argentine

### Fruit

E. S. Zaballor has been appointed a special commissioner by the Argentine Minister at Washington to investigate methods of fruit culture in California. For some time past the South American republic has been watching with interest the great success of California fruits, cereals and wines, and very recently determined to investigate our methods of culture. In furtherance of this purpose E. S. Zaballor was instructed to leave Washington and come to this coast in order that he might study the subject at first hand.

## Does Farming Pay in California?

Week before last I had occasion to spend two days in a very rich section of the San Joaquin valley, where I was the guest of one of the large grain farmers of California. It was a typical bonanza ranch. A drive beautifully shaded with umbrella trees led half a mile from the main road to the farmer's home—an almost palatial dwelling in the Italian style in the midst of an exquisitely groomed landscape. Adjacent there were two ranch houses or barracks in which something like fifty men found board and lodgment, and a little farther away a collection of huts where some thirty or more Chinese were herded. All about there were hay sheds, granaries, stables and carriage houses, with a vast implement house and blacksmith shop. An open yard was full of wagons, great and small; and in and about there was a wilderness of machinery, among other things three big combined harvesters. The fifty-acre space given up to these uses afforded scarce room enough. In the stables I counted eighteen head of sleek driving stock; while in pasture just beyond the farthest line of hay sheds there were twenty-one horses and ninety-two mules. Still beyond lay a broad domain of green fields—some seven thousand acres.

Inside the dwelling-house, as without, everything was upon a grand scale. The rooms were richly furnished; carpets of velvet, tapestries of silk, carvings of mahogany and oak; and three light-footed Chinese servitors found plenty to do to keep all in perfect order. The master of all this was, but for his secretary, all alone. His wife with the younger members of the family was spending the winter in their city home. A son of twenty-two was in his third year at Cornell College; a daughter of nineteen was travelling abroad. Within a few days the master himself intended going to the city, leaving the administration of his principality in the hands of his secretary and superintendent. "I used," he said, "to love the place—that was before we built this house; but somehow of late years I find it intolerable unless I am so pushed with work that I forget my surroundings. In the spring and again in the fall my wife and little ones come up for a few weeks and then it seems brighter; but it's very dreary for them unless we have the house full of company; and we are all willing enough when the time comes to go back to town. There are," he went on, "several reasons for it. In the first place, the help is mostly of the 'blanket' class with whom, of course, there can be no more social fellowship than with so many Chinamen. Then again, in the consolidation of the place, the neighborhood has been destroyed. Do you see those trees?" As he spoke he pointed to little green clumps which dotted the prairie for miles about, and I counted seventeen. "Each of those spots," he went on, "marks the site where a farm house used to stand. One by one I took in the places, so that my ranch of seven thousand acres now includes them all. It makes a fine place but it's dreadfully lonesome. Why, we used to have great times twenty-five years ago—that is when we were young and first married, with neighbors all about us. We used to hitch up on Saturdays, load the babies into the carriage—or what we then called a carriage—and go off to Grange. All the neighbors round belonged and we had gay times. It seems very small and trifling now to look back to, but we really had very pleasant times. Now, you see, our interests are all in the city. The young people don't care to stay here; my wife hates it and sometimes I almost hate it myself. It is, indeed, a fine place, and in times past has been a great money-maker—but I fear that's all past."

In the evening we sat late before a wood fire and my host talked freely of affairs. "Wheat farming," he said, "is absolutely done for in California, at least for the present. I see in your paper, the RURAL PRESS—which, by the way, I have taken for twenty-four years—the statements being made as to the cost of producing wheat, etc. Well, they don't make it too black if anything, they make it too bright. Why, I have here one of the best places and one of the best plants in California. Last year I raised twenty-two hundred tons, and after I had

paid my labor, for necessary machinery, etc., I didn't have a penny left. Why, I didn't clean up the half of one per cent upon a low valuation of my land. If it hadn't been for a little city property I have, the Lord only knows how I would have paid my taxes and family expenses. And I see no help for it; there's a little flurry in the wheat market just now, but it's wholly superficial. Wheat is down and it's going to stay down. I only wish I had unloaded when I might have gotten something out of it. I used to consider this ranch worth a round hundred and twenty-five dollars per acre; but I question if to-day I could sell for forty—not even if I were to throw in the improvements, stock, etc., which have cost over fifty thousand dollars." We drifted on to the labor question, and here my host was without hope. "You wouldn't believe," he said, "what a class we have to deal with. Of course there are exceptions; and we have a few boys who have been with us a long time, who are sober and who save their money; but the general run of 'blanket' men—that is, the class which tramp about the country working here a month and there a month—are degraded and unreliable to the last degree. It makes not the slightest difference what they earn, because, be it much or little, it goes into the nearest gin-mill. Of course such men have to be watched from morning till night, or they will soldier on you. It seems sometimes as if the race of self-respecting workmen had died out." I asked if it wasn't the fault of the system which regarded a man just as it did a horse or a machine, and made no provision for more than his animal necessities of food and sleep. He replied that perhaps that had something to do with it, but he didn't see how it was to be helped. "Somehow," he declared, "the work has got to be done, and if we can't get white men, then we must fall back on Chinese or Japs." Coming to political matters, my host declared that he grew hopeless about the future of the country. "Our politics," he said, "grow more and more corrupt, and I sometimes fear it must end in an explosion." These gloomy views I found had a basis in an almost desperate business situation. "Here I am," he said, "apparently rolling in wealth, but there is not a man in my ranch-house who is really poorer. My business is practically busted since it costs as much to produce wheat as I can sell it for. I can't sell my place for twenty per cent of its value. My wife, like myself, has been weaned from our home. My children are strangers to it and are bored if they have to spend a week here. I am living in a style which costs eight thousand a year and I can't see where to cut down and I can't see my way to keep it up."

Last week I went again into the country—this time to Stockton—where I fell in with an old friend who in years past worked with me at the printing trade. I hardly recognized in the brown and hearty farmer the pale youth of ten years back. He had, he said, turned rancher, had a wife and two children and lived three miles out of town. When the business of the day was done I went home with him for the night. I found a farm of ten acres with two comfortable dwellings side by side, one occupied by my friend and the other by his parents, the latter being the owners of the place. There were seven acres in vines; one and one half acres in pasture and the remaining acre-and-a-half was devoted to buildings, orchard, garden, etc. In the stable there were two stout horses; and three cows—two Jerseys and one Holstein-Friesian—were at the bars waiting their evening feed and to be milked. Fifty chickens were comfortably housed near at hand; and still beyond a shoat grunted in fat content in his sty. The quarter-acre which separated the two dwellings was sown to alfalfa, which, under irrigation with the aid of a windmill, yields five crops of green feed during the year. Between rows of young trees there were onions, corn, peas, and a variety of "garden sass," and in a warm box under glass a forest of young tomato plants were awaiting the time for setting, when the season of frost should be past. A little apart a space was devoted to young wild grape cuttings—"resistant stock"—ready for planting in the place of vines which might show signs of phylloxera. Inside the houses there was every evidence of comfort and abundance; and the supper—well, it is



long since I have had its match. There was the freshest and the best of everything—butter of the day's churning, eggs freshly laid, milk still warm from the cow, vegetables less than an hour from the ground—not to mention staples nor sweetmeats of home production.

Later, the people from the "other house" came over and there was an evening of such human friendliness as I think one only finds in the country. At last I ventured to ask how such manifest prosperity for two families—eight persons—was attained from such a little bit of land. The good wife was the spokesman, and I only wish the whole of California could have heard her account of the methods practiced on this model little farm. The place, she said, had been bought years ago as a family investment; but later considerations of health had induced them to make it their home. "When we came to it we owed no man a dollar and we have made the principle of pay-as-you-go the rule of our business. Until our son joined us three years ago we had no help but our own hands, but we were never afraid of soiling them. Our chief product is grapes, and I don't think I brag in saying that no better grapes go out of any vineyard in California. It is our boast that never an imperfect bunch of grapes was shipped from this ranch. Our wine grapes are sold to the local winery near by, but our table grapes go to San Francisco and to the remote markets. We go over every cluster scissors in hand, and every imperfect berry is clipped off. The result is that in the markets where our brand is known, we always have the preference." Coming to other matters, the good lady said: "From the cows you saw, I make daily churnings and there is, of course, ready sale for the product, and this brings in a very neat sum each month." Other side products, I was told, were in the form of eggs, a fat porker every few months, an occasional dozen of chickens, fresh fruits, garden stuff, etc. "Why," said the young man, "our trees are only for home supply, but I sold between forty and fifty dollars' worth of fruit from them last season. Again, I planted a few rows of black corn for home use, but sold fifteen dollars' worth to our butter and egg customers. Then last year I supplied one of the Stockton hotels with tomatoes from our garden, and that yielded a pretty penny. Two of our near neighbors don't keep cows and three dollars a month come in from the sale of milk." These are the main items of income, but they were not all; no possible gain had been overlooked; nothing had been allowed to go to waste. "We made," said the good lady, "a very handsome saving from last year's business, and have done it in each of the twelve years in which we have lived here. I think I may say that we have done it without hardship, though not without industry and prudence. My husband and I have done much which some people would call Chinaman's work, but we have felt that what was necessary was honorable, and have taken both pleasure and pride in it. We have never gone poor or scant of anything essential to comfortable and intelligent living, but we have scrutinized every item of out-go and have rigidly discriminated between what we wanted and what we needed." And as she talked it all seemed so easy and natural that I wondered how anybody with two hands and a few acres could be poor in California.

Of course results like these were not attained by chance. Back of them lay the forces of intelligence and high character. And as I talked with the good lady upon matters beyond the circle of her home duties, I found that, with all her labors, she had found time for reading and for profound reflection. "I read your paper," she said, "with great interest and find in it a good deal that is practically helpful, but I find that I usually have to develop my own way to do things about the place. The department 'From an Independent Standpoint' is, to my notion, worth twice as much as all the rest. Even when I don't agree with it, I have the feeling that it is straightforward, and that is a quality we don't get any too much of in the public prints." Then she talked of politics. Woman suffrage, she thought, was bound to come, because it was nothing more than simple justice and she believed it would result in good, though she did not expect it to make the world over all at once. She thought a great danger

to the future of American institutions lay in the fact that Americans do not bring their children up to industry and economy. The coming political party she thought would be somewhat on the lines of the A. P. A., with more regard to industrial than to religious considerations. Unless there were some change the best things in the country would be in the hands of foreigners—but she didn't expect it to come to that. She believed the American people would come to their senses, leave off follies, again take up the tasks of life, and so reclaim what they had lost. An important agency in the rural life of the country she believed was the Grange, to which all the family belonged. It took, she said, almost a whole working day out of each week, but it was a day well spent, for it yielded social pleasures, instruction and much else that makes life profitable. With such talk the visit seemed short, and I was genuinely sorry when the time came to go.

ALFRED HOLMAN.

### The Coming Fruit Crop.

Late Reports from Various Sources.

The fruit interest is now seeking for every indication which may prophesy the coming crop. Knowing the active appetite for news in this line, we requested Mr. B. F. Walton, president of the California Fruit Exchange, who has been in the field in the interest of co-operative marketing, to give us such information as he could secure on his travels. From all the information he can gather, Vacaville and Suisun and some small parts of the Sacramento and San Joaquin valleys have been seriously affected on all early fruit, particularly apricots and early peaches, and, to some extent, cherries. Apricots in other parts of the State are poor even in sections not affected by frost, largely due to the immense crop of last year and dry season. Other kinds of fruit from all parts of the State up to this time look promising, and with the continuance of good weather for the coming months a good average crop of fruit can be depended upon.

From the various sections of the Santa Clara valley comes a variety of reports. In the low, wet sections and exposed localities considerable damage was done by the frost to all fruit that happened to be sufficiently forward to be affected; otherwise the crop is good, harring apricots, which show a light crop except in a few favored orchards and exceptional localities.

There are so many contingencies affecting the fruit crop for the next five or six weeks that no fruit man of experience will stake his reputation on an estimate of the fruit crop for the season of 1895, but present appearances point to a good fruit season, with at least an average yield of all varieties of fruit except apricots, in which no improvement, however marked, can possibly bring them up beyond a very small fraction of an average crop.

#### NOTES FROM EXCHANGES.

Watsonville: *Pajaronian*.—In spots in Green valley, near Vega and in the section north and east of Watsonville, the apricots were badly injured; and prunes, cherries and peaches will have a decreased yield. Some orchardists report that their prunes and apricots were cut so badly that there will be no yield, but these reports are usually overestimated.

Yuba City: *Farmer*.—But little loss will result from the cold snap here. The almond trees had commenced to leaf out and had quite a foliage to protect the blossoms. Apricots were caught in some of the orchards and this will cut down the already short prospect for that kind of a fruit crop. Peaches, pears, cherries and other fruits are reported to be uninjured.

Santa Clara: *Interview with Col. Hershey*.—Some individuals and localities have suffered here to some extent as far as apricots are concerned, but nowhere is there a complaint of a total loss of that fruit. There was no prospect in any event of getting more than three-fifths of a crop of apricots this year and the frost may reduce it so that the crop will not be more than half that of last season. The loss in quantity, however, will be more than made up in quality.

Visalia: *Times*.—From conversation with prominent orchardists to-day we learn that the apricots are about all killed in this vicinity, but as there is a very limited acreage planted to that fruit around Visalia the total loss will be small. In some places peaches were damaged, but there are more left on the trees than are wanted, and if there is not another severe frost later considerable thinning will have to be done. The prunes and pears are uninjured.

### Gleanings.

J. LAWSON has offered to establish a modern cheese factory at San Bernardino if the farmers thereabout will engage to supply milk in sufficient quantity.

A REQUEST made to the S. P. Railroad Co. by the San Jose Board of Trade, for free transportation for fruit exhibits destined for the Santa Clara county advertising car, has been refused.

The San Jose Board of Trade is considering ways and means of circulating leaflets giving directions for cooking California dried fruits. The first distribution will number 20,000 but it is expected to send fifty times that number later on.

LOS ANGELES *Times*, 23d inst: The orange market has been dull during the past week for everything but choice fruit. The shipments have fallen off considerably. This is owing to the large quantity of ordinary fruit that has been received

on the Atlantic coast from Europe. These oranges do not come into competition with the fancy grades of California fruit, but affect the seedlings. No change in quotations has been made by the exchanges up to the present writing.

HARRIS BARTLETT is to build and operate a 500-cow creamery at Stony Point, Sonoma county. Mr. Bartlett has run a small private dairy on his ranch for some time, but now sees the need of enlarging the plant and putting in improved machinery to aid the industry which thrives in his section.

WHEATLAND *Four Corners*: Hop work has begun. Roddan Bros. are already pruning and the other growers will commence next week. There will be no necessity of hiring Chinamen this season, as there are hundreds of able-bodied Americans who are earnestly seeking work—wages no great object. In the lower part of town there has been a camp of unemployed the last few weeks. Between looking for employment and providing for the necessary bread or biscuit the men pass the time reading or playing games. We believe the majority of these men are not of the tramp order and are willing to work. There is one certainty: there are enough good men among them to make up the hop crews.

At Fresno a project for a pork-packing house on a large scale is being agitated. There is already one pork-packing house in Fresno, which has passed beyond the experimental stage. It is owned by S. L. Evinger, and is located two miles north of town. In an interview last week with an *Expositor* reporter Mr. Evinger said: "I operate the place in connection with my slaughter house. I have experienced men with me who have been in the business for years. I do all my packing between November and April, and this last winter I have packed something over 2100 hogs, all raised in the county. I have no fear of the results. I get all the hogs right here at home, and those who supply me with them are anxious to raise more hogs."

MAJOR C. J. BERRY, arguing for co-operation among farmers, writes as follows to the *Tulare Register*: "One of the most extraordinary things in existence to the writer is that two boys in the country will go to school together, grow up side by side on adjoining farms, marry and settle side by side and know each other to be good, honest, reliable men, and yet there will come along a fellow with a boiled shirt on, and his only apparent responsibility is a printed business card, and solicit consignments of their produce—and get it, too—while the neighbors will not trust each other to do any part of their business. Farmers may regard such actions as the proper thing, but the writer does not. This grinding between the upper and under millstone—and the fault is the farmer's, too—ought to bring co-operation."

MADERA *Mercury*: "A sight that would have made the eyes of an Eastern farmer—who imagines he has a large farm if he has 100 acres under cultivation—open wide with astonishment was to be seen last Tuesday on the Miller & Lux land, about three miles from town. A half section of land was being plowed by Tom Tyner, who was in a hurry to get the land in proper shape. There were thirty-five plows all going at once, being drawn by six, eight and ten animals. It required 250 horses to do the work. Five harrows, making a combined one eighty feet in length, followed the plows, forty-two horses being required to pull the harrows. It was a grand sight when the horses began to move, the plows throwing up great clouds of dust and leaving a black path of newly turned earth. The land was being plowed at the rate of nearly a half section a day."

ARROYO GRANDE *Herald*: Mr. A. B. Shearer has just completed the model of a new drier that promises to revolutionize the existing methods of fruit drying. The fruit is run into the drier in cars, and the hot air is distributed equally over the fruit by a fan blower, reaching the cars in waves like the blasts of the north wind. The heated wind is used over and over again, thus minimizing the cost of production. In all other driers the hot air comes in from the bottom, travels up and out and is lost, thus entailing great expense to keep up the supply. Mr. Shearer's machine overcomes this loss and by the wave application gets the greatest possible amount of drying power out of a comparatively small amount of fuel. Application for a patent has been made by Mr. Shearer, and we hope soon to see one of the new driers in operation in our valley.

EDITOR BOYNTON of the Oroville *Register* offers the following good suggestion: "Now that it is settled concerning fairs in this State, it is to be hoped that something more than the old-time agricultural display will be made. Why cannot we make an advance on the ordinary fair? Let us illustrate. Let the managers select competent persons and show the public, in newly cooked dishes each day, the different methods in which fruit and vegetables may be used. Take raisins and show the public all the ways in which raisins can be utilized in the family. Show what can be done with oranges and lemons. Give practical illustrations of olive pickling and olive-oil making. Present to the public, for inspection and taste, peaches and prunes prepared in as many ways as possible. People go to a fair out of curiosity, to see something new, novel and curious. They go to learn something, too, and the fruits and vegetables can be put to good use in drawing a crowd."

Watsonville *Rustler*: The beet-crushing season is drawing to a close. All the beets from the Pajaro and Salinas valleys have been delivered, and it is expected that the Watsonville factory will wind up a long season's work to-night, or tomorrow night at the latest. The tonnage of beets handled this season is estimated at 112,000 tons. Of this amount the Salinas valley and the Cooper ranch contributed 72,000 tons, the Pajaro valley 59,000 tons and the Moro Cojo ranch 14,000 tons. The season was protracted by the rains, and the difficulties attending the delivery of beets at the factory, owing to the inclemency of the weather and the general backwardness of the crop. The average yield of the entire beet district is sixteen tons per acre, although in some instances the yield has been from twenty-five to thirty-five tons per acre. The work of preparing the land for next season's crop has already begun. Contracts for 3500 acres in the Pajaro valley have been signed. It is expected that 8000 acres will be planted to sugar beets this year in the Pajaro and Salinas valleys and San Benito county.

SEBASTOPOL *Times*: Val Watson is of the opinion that a creamery of ordinary capacity ought to pay well in Sebastopol. It would be an easy matter, were a creamery established here, to obtain the milk of nearly 500 cows, if not more. The



dairymen in the surrounding country would be only too glad to support such an institution in Sebastopol and we think an effort should be made to secure a plant for the town. Mr. Watson told us that a few years ago Valley Ford as a business point was as dead as an Egyptian mummy, but that the establishing of a creamery there led to other improvements and now they have a calf and hog market and the town is altogether a lively business point. It is just such projects which centralize the trade of the surrounding country and Sebastopol is in need of all these centralizing agencies. Creameries are being established all over the county and Sebastopol should try to get into line. Mr. Watson says that creamery butter brings five and six cents more in the market than dairy butter, and he, with other dairymen, is naturally anxious for a creamery to be established within reach of his place; and Sebastopol is the proper location. Mr. Watson milks about sixty cows.

The deciduous fruit growers of southern California held a meeting in the Chamber of Commerce rooms in Los Angeles on the 22d, for the purpose of forming some organization similar to that of the orange growers. Secretary W. E. Collins of the San Antonio Fruit Exchange was elected chairman of the meeting, and G. W. Ogle, of Pomona, secretary. After much discussion regarding the need of organization, resolutions were adopted favoring the formation of local organizations of deciduous fruit growers throughout the State, and the use of the citrus organizations, so far as possible, for selling the fruit. They recommend that the local organizations, when formed, shall co-operate with growers in other parts of the State through the California Fruit Exchange; that the expediency of forming a southern California organization be determined by the local organizations; that a committee of three be appointed to organize local associations throughout southern California; and requests that the local associations give their share of financial support to the California Fruit Exchange. The following persons were appointed as a committee to organize exchanges: C. C. Thompson, Pasadena; D. W. Hanna, Los Angeles; G. W. Ogle, Pomona. It was decided to hold a general delegate convention in one month. Those who attended the meeting, says the *Pomona Progress*, are very sanguine of the success of the movement, which the growers have had under consideration for a long time.

### Rainfall and Temperature.

The following data for the week ending 5 A. M., March 27, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the *PACIFIC RURAL PRESS*:

| CALIFORNIA STATIONS. | Total Rainfall for the Week. | Total Seasonal Rain-fall to Date. | Total Seasonal Rain-fall Last Year to Same Date. | Average Seasonal Rain-fall to Date. | Maximum Temperature for the Week. | Minimum Temperature for the Week. |
|----------------------|------------------------------|-----------------------------------|--------------------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|
| Eureka               | 1.86                         | 36.34                             | 48.23                                            | 34.80                               | 74                                | 42                                |
| Red Bluff            | 80                           | 25.68                             | 18.67                                            | 21.14                               | 72                                | 44                                |
| Sacramento           | 26                           | 22.22                             | 13.85                                            | 17.40                               | 68                                | 40                                |
| San Francisco        | 20                           | 23.06                             | 16.10                                            | 20.96                               | 70                                | 46                                |
| Fresno               | T                            | 11.79                             | 6.17                                             | 9.80                                | 76                                | 36                                |
| Los Angeles          | T                            | 12.48                             | 6.40                                             | 17.23                               | 84                                | 42                                |
| San Diego            | 04                           | 10.75                             | 3.98                                             | 9.20                                | 70                                | 46                                |
| Yuma                 | ....                         | 2.97                              | 2.16                                             | 3.45                                | 96                                | 48                                |

### Cost of Shipment.

Letter in San Jose *Mercury*.

Here is a statement of what it costs to ship fresh fruits from San Jose to Chicago and New York as per the rates exacted for the past two years of financial disaster and depression, and which the Southern Pacific Company refuses to modify or grant any concessions for the fruit season of 1895, as per the answer of its Vice-President, J. C. Stubbs, to such requests formulated and made by the leading fruit-growers and shippers in convention assembled:

To Chicago—Rates per freight, time ten to twelve days, per 100 pounds, \$1; per car of twelve tons, rate \$1.25, \$300; refrigerator service, \$140; total, \$440; 25% additional for fast time; approximating passenger service, \$550.

To New York—Rates per freight, time ten to twelve days, per 100 pounds, \$1.50; per car of twelve tons, rate \$1.25, \$360; refrigerator service, \$190; total, \$550; 25% additional for fast time; approximating passenger service, \$687.50.

After paying the transportation charges and commissions the returns to shippers show that for the season of 1894 of the entire fresh-fruit shipments of northern California fully 80% was absorbed by above-mentioned charges on the grand total amount realized, approximating the sum of \$5,600,000. It is a fact that no producer, no manufacturer, in justice to themselves, in justice to the consumers of their products, however prolific they may be, in times of prosperity or in times of adversity, can maintain his self-respect and dignity and longer submit to the extortions of a human vampire and demon of evil lost to all sense of justice and equity, whose policy would eventually reduce to vassalage an intelligent and enlightened community. The capitalist who holds mortgages on the industries of his patrons is interested in their prosperity and should, for his own welfare, aid in whatever insures their resources. To the merchant the same rule more forcibly applies. To the fruit-growers their very existence is at stake and demands relief.

Let every man appoint himself a committee of one to work for the building and equipment of a competing outlet for our products. "Then, and not until then, shall we be recognized as a power in this land of beauty and unparalleled possibilities." Let the competitive cure be administered to the great moguls who have fattened and gorged themselves at our expense. No other remedy will ever deliver us from their despotic rules.

With a new competing outlet, new modes of fruit cars owned and controlled by the people, the order of things would be reversed and 20% of the prices realized for our fruit would pay transportation expenses, and we would have the 80% instead of the railroad combine. This would soon close the gap in the financial affairs of our fruit-growers, as well as all who are dependent on their prosperity.

### Annual Review of California Products.

Gen. Chipman's Fifth Report to the State Board of Trade.

Hon. Eugene J. Gregory, President State Board of Trade—DEAR SIR: I submit herewith the fifth annual report of shipments out of the State of fruit, wine, brandy and vegetables, by rail and by sea.

These reports were begun for the year 1890 and have been the only complete statements of the industries embraced in them that have been given to the public. They show not only the growth of the industries, but their distribution throughout the State.

I have endeavored to obtain the data so as to show the real point of shipment, and thus show the relative quantities moving from the various fruit-growing counties. This information would have gratified local pride and would have been a detailed index of fruit-growing localities. But various difficulties seem to make this impracticable. The transportation companies say that the information cannot be given without involving more time and labor than they can give to its preparation. The reports, however, give terminal points, and that is the best that can be done.

I have been unable to get the shipments by sea from any port except San Francisco. They are not large, probably, but quite considerable from Los Angeles and San Diego, and possibly from some smaller seaports. I do not think, however, they would very greatly increase the total.

The tables are as follows:

TOTAL SHIPMENTS OUT OF THE STATE, BY RAILROADS, OF FRUITS AND VEGETABLES IN 1894.  
Tons of 2000 pounds. Given from Terminal Points.

| PLACE OF SHIPMENT.                      | Green Deciduous. | Dried.   | Raisins. | Nuts.   | Canned.  | Citrus.  | Vegetables. | All Kinds. |
|-----------------------------------------|------------------|----------|----------|---------|----------|----------|-------------|------------|
| <i>Northern California.</i>             |                  |          |          |         |          |          |             |            |
| San Francisco                           | 85.3             | 6,369.6  | 904.3    | 339.5   | 24,137.8 | 24.0     | 9,977.5     | 41,533.0   |
| Oakland                                 | 5,300.3          | 444.4    | 12.2     | 109.1   | 2,049.5  | .3       | 12.0        | 7,927.8    |
| San Jose                                | 12,942.1         | 15,588.5 | 16.8     | 71.6    | 9,292.1  | 2.1      | 483.7       | 38,336.9   |
| Stockton                                | 6,501.8          | 6,854.9  | 38,926.4 | 95.4    | 163.1    | 12.7     | 4,058.8     | 56,613.1   |
| Sacramento                              | 52,880.1         | 10,276.5 | 1,570.7  | 385.3   | 8,245.6  | 44.8     | 8,876.9     | 82,279.9   |
| Marysville                              | 4,284.2          | 4,093.7  | 322.0    | 189.1   | 3,585.4  | 94.3     | 373.1       | 13,934.8   |
| Total tons.                             | 82,003.8         | 44,527.6 | 41,752.4 | 1,183.0 | 47,473.5 | 178.2    | 23,782.0    | 240,990.5  |
| Total cars.                             | 8,209.3          | 4,452.7  | 4,175.2  | 118.3   | 4,747.3  | 17.8     | 2,378.2     | 24,099.0   |
| <i>Southern California.</i>             |                  |          |          |         |          |          |             |            |
| Los Angeles Co                          | 3,726.2          | 4,540.3  | 1,193.5  | 2,250.0 | 4,489.1  | 29,375.3 | 16,784.6    | 62,968.0   |
| Orange Co                               | 193.2            | 778.7    | 212.5    | 472.3   | 5.0      | 4,735.5  | 1,474.0     | 7,571.4    |
| San Bernardino Co                       | 2,053.3          | 1,284.6  | 1,300.0  | 15.0    | 689.7    | 5,418.0  | 517.0       | 12,184.6   |
| Riverside Co                            | 731.7            | 60.0     | 1,287.5  | 1.8     | 18,574.5 | 110.0    | 20,765.5    | 20,765.5   |
| San Diego.                              | 54.0             | 78.0     | 1,162.5  | 6.5     | 682.5    | 99.0     | 2,082.5     | 2,082.5    |
| Total tons.                             | 7,688.4          | 6,731.6  | 5,156.0  | 2,746.5 | 5,180.1  | 58,785.8 | 18,984.6    | 105,272.0  |
| Total cars.                             | 768.8            | 672.1    | 515.6    | 274.6   | 518.9    | 5,878.5  | 1,898.4     | 10,527.2   |
| Total carloads from State by rail.      | 8,978.1          | 5,124.8  | 4,690.8  | 302.9   | 5,266.2  | 5,996.3  | 4,276.6     | 34,696.2   |
| By sea, carloads                        | 91.0             | 57.9     | 4.6      | 2.4     | 769.0    | ....     | 410.0       | 1,334.9    |
| Total carloads.                         | 9,069.1          | 5,182.7  | 4,695.4  | 305.3   | 6,035.2  | 5,806.3  | 4,686.6     | 35,991.1   |
| Carloads canned vegetables not included | ....             | ....     | ....     | ....    | ....     | ....     | ....        | 89.0       |
| Total                                   | ....             | ....     | ....     | ....    | ....     | ....     | ....        | 36,080.1   |

GENERAL SUMMARY AND COMPARATIVE TABLE SHIPMENTS, BY RAIL AND BY SEA, OF FRUIT, WINE, BRANDY AND VEGETABLES, FOR FIVE CONSECUTIVE YEARS.

| KINDS.                                                          | Pounds. 1890. | Pounds. 1891. | Pounds. 1892. | Pounds. 1893. | Pounds. 1894. |
|-----------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|
| Green Deciduous                                                 | 68,084,124    | 96,689,100    | 111,688,640   | 159,905,000   | 179,574,800   |
| Citrus                                                          | 68,419,370    | 93,892,800    | 89,862,800    | 161,514,000   | 177,928,400   |
| Dried Fruits                                                    | 61,505,181    | 65,000,230    | 58,735,980    | 82,476,800    | 102,510,800   |
| Raisins                                                         | 41,120,330    | 44,954,850    | 53,113,320    | 74,788,000    | 93,826,400    |
| Nuts                                                            | 1,574,230     | 2,623,560     | 4,015,240     | 3,585,000     | 7,829,000     |
| Canned Fruits                                                   | 80,121,950    | 49,566,680    | 77,555,830    | 55,681,400    | 105,325,200   |
| Total pounds                                                    | 323,915,185   | 354,778,210   | 374,324,000   | 537,950,200   | 608,994,600   |
| Carloads Fruit by rail                                          | 16,165.7      | 17,738.9      | 18,741.2      | 26,897.5      | 30,340.7      |
| Carloads Fruit by sea                                           | ....          | ....          | ....          | 431.7         | 924.9         |
| Carloads Fruit by rail and sea                                  | ....          | ....          | ....          | 1,754.5       | 31,274.5      |
| Carloads Vegetables by rail                                     | ....          | ....          | ....          | 27,329.7      | 4,276.6       |
| Carloads Vegetables by sea                                      | ....          | ....          | ....          | 6,978.4       | 410.0         |
| Carloads Wine and Brandy by rail and sea                        | ....          | ....          | ....          | 4,765.4       | 7,693.5       |
| Carloads Fruit, Vegetables, Wine and Brandy by rail and sea     | ....          | ....          | ....          | 4,832.4       | 43,624.7      |
| Additional Carloads Canned Vegetables                           | ....          | ....          | ....          | 40,928.5      | 89.0          |
| Total Export Product of Orchard, Garden and Vineyard (Carloads) | ....          | ....          | ....          | ....          | 43,713.7      |

Mr. Clarence J. Wetmore, chief executive officer of the State Board of Viticulture, reports to me shipments of wine and brandy as follows, for 1894:

|                 | Cases. | Gallons.   | Value.      |
|-----------------|--------|------------|-------------|
| <i>By Rail—</i> |        |            |             |
| Wine            | 1,280  | 442,803    | \$ 677,006  |
| Brandy          | 34,312 | 11,454,683 | 4,719,121   |
| <i>By Sea—</i>  |        |            |             |
| Wine            | 513    | 358,774    | 338,323     |
| Brandy          | 12,672 | 2,576,722  | 1,106,831   |
| Total Brandy    | 1,793  | 801,577    | \$1,075,323 |
| Total Wine      | 45,084 | 11,031,405 | 5,825,952   |

WINE AND BRANDY, REPORTED BY THE RAILROAD COMPANIES FOR 1894.  
(Tons of 2000 Pounds.)

| PLACE OF SHIPMENT.         | Brandy. | Wine.    |
|----------------------------|---------|----------|
| San Francisco              | 1,403.3 | 35,555.4 |
| Oakland                    | 30.5    | 1,000.0  |
| San Jose                   | 11.2    | 3,077.4  |
| Stockton                   | 100.9   | 2,924.2  |
| Sacramento                 | 274.4   | 13,526.3 |
| Marysville                 | 256.6   | 119.9    |
| Total—Northern California. | 2,176.2 | 56,203.2 |
| Cars                       | 217.6   | 5,620.3  |
| Total—Los Angeles.         | ....    | ....     |
| Cars                       | ....    | ....     |
| Carloads by rail           | ....    | ....     |
| Carloads by sea            | ....    | ....     |
| Total                      | ....    | ....     |

The tables of shipments by rail are compiled from

data politely furnished me by officers of the transportation companies. Mr. Clarence J. Wetmore, manager of the State Board of Viticulture, has kindly given me shipments as compiled by him from his reports of wine and brandy shipped by rail and by sea. The shipments of fruits and vegetables by sea I have compiled from the annual number of the *San Francisco Commercial Herald and Market Review*.

The shipments from the several counties of southern California were not returned to me by counties, except by one company. The other company treated all shipments south of the Tehachapi mountains as from one point—Los Angeles.

I have continued the plan of former reports in keeping the shipments from northern California and southern California separate. However much we may deprecate this separation of the two regions by name, it is now too late to ignore the fact that they are known not only here but in the East by such designation, and I do not think this nomenclature will ever be abolished. It is quite proper, therefore, that our reports, so long as it can be done, should group the output by these divisions. Nothing can more completely dispel false claims made by either region than the actual figures. They show not only quantities but varieties from each. The distribution of fruits shows the distribution of climatic conditions.

When we see that in 1884 nine carloads of oranges were shipped from Marysville in the extreme north, and that all other fruits on the list appear in large quantities from that region, we can safely conclude that California enjoys practically the same climate

for the entire length of its valley region. Where nine carloads of oranges may grow, nine hundred can be made to grow. We have happily outgrown local prejudices, and are finding it more profitable to tell the truth about each other than to mislead by mutual detraction.

### SHIPMENTS BY SEA.

The exports of the products of our orchards, vineyards and gardens by sea to foreign ports are significant, considering that we are obliged to almost circumnavigate the globe to reach European countries.

England took 120,728 cases of canned fruit; Australia 16,594, and New Zealand 5916. These three countries took all but 30,613 cases shipped to foreign ports. We did not send a case to France, and only 136 cases to Germany. Our neighbor, Mexico, took but 106 cases. British Columbia bought only 952 cases, and Central America but 758 cases. China took 2139 cases only, and Japan but 1134. There is something the matter with our merchants when they fail to sell a case of canned fruit in France, and sell only 136 cases in Germany.

I venture to invite the young men who aspire to enter the field of commerce to carefully study the annual number of the *Commercial Herald and Market Report*, showing our trade of 1894. I can see a vast field to be exploited for California products. The canned-fruit industry of California has been in the dumps for two or three years, and will continue to be until the canners enlarge the horizon of their commercial vision, I cannot understand, for example, why we could ship over 130,000 pounds of dried fruit



around Cape Horn to Germany, and only 136 cases of canned fruit.

Our trade of all kinds with France is ridiculously small. It amounted in 1894 to less than \$50,000 of California products, of which about \$43,000 were barley and wheat.

I must be pardoned a moment's departure from the strict line of this report to notice some of the curious features of our trade.

Ireland, for example, bought more from us in value than all the balance of Europe. She purchased twenty-five per cent in value of all our exports, but it was chiefly wheat and barley, which gave us but little profit. Russia did not buy from us a dollar's worth of anything. She had some exhibits at our Midwinter Fair, and gets into the shipping lists only through these returned goods. Russia is a large consumer of the very products that have made California famous—nuts, raisins, olives and olive oil, prunes, canned goods, wine and brandy. Why will not some wide-awake California merchant go to St. Petersburg and offer some of our fruits and wines?

I am not surprised that Italy and Spain got into our export lists the same way as Russia did, and purchased nothing, but I cannot account for our failure to reach Russia except through sheer neglect and indifference.

I suppose that some of our people believe that the trade in Alaska is monopolized by California and amounts to something. The record shows one package of ammunition, worth \$25.

I find that our canned fruits are sent to Bombay and Calcutta. Indeed, our fruits, wines and brandies find their way in limited amounts to most of the commercial ports of the world, but in no sort of proportion to inhabitants, and in no relation to what would seem to be a demand when once introduced. We have found it true in our own country that our market expands in proportion to the effort to place our products before consumers. The world's markets are our markets when we shall have given some of our zeal in planting to the problem of selling.

In my report of shipments for 1891 I worked out a table giving quantity and value for all foreign countries or ports. A comparison of 1891 with 1894 will show a falling off in canned fruits, but an increase in all others. The quantity shipped is large enough to show that there is a demand. We have perceptibly increased the sales of dried fruit. We now export by sea from San Francisco to foreign ports nearly ten per cent of the entire product of dried fruit, excluding raisins. I regard this as quite significant. In 1891 the amount was 747,914 pounds. In 1894 it was 923,522 pounds. In 1891 we consigned to only sixteen points on the globe. In 1894 to forty-two points. We more than doubled the shipments to England, and we increased the shipments to Australia over 100,000 pounds.

A notable feature is the exports of vegetables by sea, of which we sent away over 8,000,000 pounds, most of which were beans, onions and potatoes.

#### SHIPMENTS EAST BY RAIL.

The comparative table for the years 1890 to 1894, both inclusive—a period of five years—shows the steady advance of the industry. The year 1894 compared with 1890 shows the following increase:

|                                 | Carloads. | Per Cent. |
|---------------------------------|-----------|-----------|
| Green deciduous fruits.....     | 5,557.4   | 163.7     |
| Citrus .....                    | 2,475.5   | 75        |
| Dried .....                     | 1,895.7   | 58.7      |
| Raisins .....                   | 2,635.3   | 128.1     |
| Nuts .....                      | 312.7     | 397.3     |
| Canned .....                    | 1,260.0   | 31.4      |
| Average increase all kinds..... | 14,158.9  | 87.7      |

The shipments of citrus fruit fell off in 1894 as compared with 1893, in carloads 2179.2, by reason of the cold wave of 1893-4, whereas there should have been an increase, I think, nearly equal to that in deciduous fruits. But for this 1894 would have shown at least 3000 carloads more than we shipped, and this would have made our combined shipments of all kinds of fruit by rail more than double that of 1890.

The canned fruit sent out by rail in 1894 was nearly double that of 1893. Part of this shipment was stock carried over probably, but the increase of the output was large.

This industry is on the least satisfactory basis of all our fruit interests, unless it be the green. There seems to be no adequate cause for the great fluctuation in the output. The value of our canneries to the orchardist is conceded to be very considerable, and they should receive all possible encouragement.

I am told by gentlemen in the business that there is profit in packing first-grade goods, but a loss in the lower grades. Would this not suggest sending the smaller sizes to the drying-house, and packing only the best? I have no doubt but that the superior quality and comparative cheapness of our dried fruits have much to do with the dull market for canned goods.

There are many consumers, however, to whom these considerations are nothing, but they must have only the best. For such goods there is a profit to the grower and to the canner, for the canner can better afford to pay the grower two or two and a half cents a pound to meet this want than three-quarters or one-half cent a pound to make so-called pie fruit or other rubbish, into which large capital is placed at actual loss.

The green-fruit shipments have increased 163.7%

since 1890. In 1894 we shipped 984 cars more than in 1893, but we made less money on the business. Low prices, dull market and increased cost of transportation, because of increased cost of refrigeration, left no profit in many cases, and but little in others. The exigencies of this branch of our industry have brought the best intelligence among horticulturists face to face with the transportation companies, to devise some relief. Devices by which refrigeration is to be supplanted by cheaper processes of preserving fruit in transit, and faster time for ventilated cars, are promised by the railroad companies as a solution of the trouble. Let us hope that selfishness, if no higher motive can be invoked, will lead the transportation companies to maintain green-fruit shipments at freight rates that will allow a profit to the grower.

There has never been an instance within my knowledge where any railroad company deliberately choked an important industry to death that was giving it profitable business. I ground my faith in the future profits of the green-fruit shipments, as of other business within railroad control, upon that valuable lesson conveyed to us by the experience of the idiot who killed the goose that laid the golden egg.

Without representing in detail the results of the past five years, as shown in the tables, I am in no wise discouraged by the experiences of the past two years.

Let it not be forgotten that we have been passing through a period of financial depression such as this country has never known, and in which the whole civilized world seems to have participated. If fruit-growers had made very much money while all others were losing, we could hardly defend the industry as being planted on safe principles. The fact is, however, that the past year proved to be a reasonably good one for the growers. That the market would take our increased product of 1894 at all, in face of universal and individual want and distress, is to my mind the highest proof that we are not overproducing, and that, under normal conditions, fruit growing will continue to be the chief and most profitable occupation in California related to the soil.

Our immunity from severe cold such as has swept over the entire continent east of the Sierras during the past winter must emphasize the claim we have always made for this State as a place of residence.

We have only to show that profitable and agreeable employments are possible here to fill California rapidly with home-seekers so soon and so rapidly as they can relieve themselves without too great loss from their present environments.

Horticulture is doubtless our greatest attraction in agriculture and offers the most delightful of all rural occupations. Its charm lies partly in the esthetical atmosphere by which it is surrounded and which appeals strongly to the rudest nature. The evolution of a fruit crop from the pruning knife to the picking basket is one succession of agreeable and inspiring surprises. There is with us scarcely a month in the year when we cannot look out upon the fruit and the flowers and luxuriant foliage of some one or more of our wonderful range of varieties. Climatic conditions nowhere else to be found exist here and give not only great variety but great certainty to the industry. These considerations, added to the fact that many of our fruits cannot be produced elsewhere on this continent in commercial quantities, give assurance of profitable employment.

But these same conditions make California exceptionally a favorable place in which to practice a generally diversified agriculture.

We hold rank well in front as producers of cereals. Our wheat feeds Europe, and our barley is made into beer in Germany. We are large growers of wool and mutton sheep and cattle and horses.

Our resources in timber are very large, and our lumber industry is an important one. Our mines are increasing in value and importance. We have large deposits of petroleum. Our dairy interests are extensive. Our garden products are assuming commercial importance. Our advantages for producing beet sugar are superior to those of any State in the Union.

Indeed, there are but few occupations in which man may not engage here profitably, and at the same time be surrounded with all possible comforts that can contribute to his physical pleasure and well-being.

It is to this comparatively new and yet but partially occupied field that this Board continues to invite immigration.

N. P. CHIPMAN,  
Chairman Com. on Resources of Cal.  
San Francisco, March 19, 1895.

## HORTICULTURE.

### Constant Cultivation.

Major C. J. Berry gives the Visalia *Delta* his doctrine on cultivation. He says the main object of an orchardist ought to be to grow good fruit—the very best—and to the writer there seems to be a disposition manifested by many fruit growers to trust to luck in producing a high grade and the choicest quality of fruit. The first secret of attaining this

necessary object is to cultivate. The second is to cultivate. The third is to cultivate. And now I have told your readers all my secrets about producing good fruit, except a very important one, and that is, after you have carried out the three first secrets, then cultivate some more.

If you will just keep that cultivating lick up right along, once over your orchard every two weeks, until your trees cease to grow any more this season, along away into the fall months, you will not only make your trees vigorous and healthy, but they will yield you twice as much fruit as your neighbor's, who only plows his orchards once and gives it a little dab of cultivation now and then.

In our sub-irrigated or irrigated orchards the trees' root-feeders spread out close to the surface, and deep plowing in the spring and deep cultivation after that cuts off too many of those small rootlets to make it beneficial—in fact, deep plowing does harm, and a great deal of it. The roots running close to the surface in the warm soil makes our fruit sweet. In order to arrive at the very best result, you must keep the surface of the ground stirred frequently. So then the secret of fruit raising is cultivation.

### Views on the Root Knot.

TO THE EDITOR:—The several articles that have appeared in the *RURAL PRESS* this winter from different writers in regard to the root knot point to a common belief, and that is a defection of the proper distribution of the sap. Root knot appears to be quite common, and while many have theories of its cause and its remedy, a continuation of views and comparison of experience may assume value to those who, being troubled with it, have not as yet used remedies for its removal.

The first experience the writer had with the knot dates back twenty years and occurred on some old grape vines, pruned in the then prevailing custom to two eyes. A late frost occurring after the vines made a full growth left them bare of foliage, and warm weather returned almost immediately. The sap, in consequence, not being arrested had to have vent, which it made by bursting through the large stocks and a growth rolled out which in the course of the season hardened into the black knot. Here was an object lesson apparently uncontrovertible as to cause and effect.

Three years ago in pruning a block of six-year-old Kelsey plums on Myrobolan root, I discovered root knot, and on investigation I found that 95% were effected badly. I had the roots uncovered and carefully chiseled off the knots; then I swabbed the roots with a strong solution of Bordeaux mixture, and refilled the holes with fresh dirt. There being a thousand trees the work took time and consequent expense, and if this remedy was not to be a permanent cure, it would mean an abandonment of the trees to their fate; therefore my conjecture as to the cause of the root knot harmonized with my observation of the grape vines of former years. The cause in both cases seemed clearly to be the want of an outlet for the sap. I theorized that the trouble with the Kelseys was caused by an excessive pruning to make a naturally willowy growth stocky. I ceased pruning that block of trees, and to-day they are a sight beautiful to behold in their luxuriance, and with few exceptions (attributable to imperfect treatment) are free from root knot.

This would seem to be a confirmation of the sap theory as the cause, and the objection made that it is untenable because occurring on nursery stock I think might be overcome by not only the reasons of the writer in the issue of March 16th, but from causes the same as on the older trees excessively pruned. A thrifty stock in nursery being cut back to a bud or graft and stimulated to make a vigorous growth before a sufficient top to take up the sap is afforded, would seem to result in the way under consideration. Often, also, it may be by frost, the conditions being analogous.

There appears to be a constantly growing sentiment averse to excessive pruning on many varieties of fruit, notably the cherry; and the writer is inclined to include the apricot, in his locality, and attributes the gum and die-back in a great measure to that cause.

GEO. WOOLSEY.  
Ione, Amador Co.

### Caprification of Figs.

Prof. C. Riley, late entomologist of the department at the national capital, gave a very interesting talk at the meeting in Los Angeles of the American Pomological Society upon insects, washes, emulsions, gas, etc., and then came to his main subject, "Caprification." He said: "This subject is most complicated and has occupied the attention of the best investigators. It is a botanico-entomological operation, consisting in the transfer of certain minute insects which develop, in the seeds of the insects, the fertilization of the female flowers, and thereby the production of the edible fruits. The usual mode of caprification, practiced from time immemorial in Asia Minor, Greece, Turkey, southern Italy and southern Spain, is as follows: On a certain day in the spring of the year the young figs of the Capri fig



are gathered, two or more of them are fastened to the end of a tough rod, and these loaded seeds are laid or dexterously thrown on the twigs of the true fig tree. There is but one way to cultivate the genuine Smyrna fig in California, and that is to plant both the female fig tree and the Capri fig and to introduce and colonize the blastophagus.

The planting and raising of the Capri fig presents no difficulties whatever; it is only necessary to sow the seeds of the genuine Smyrna fig and both Capri and true fig trees will result. But the genuine blastophagus must be introduced from their native home in Asia Minor. Fruit of the Capri fig, or twigs of the tree with adhering fruit, may doubtless be brought over at the proper season in good condition, with the blastophagus within the fruits, living and healthy.

This result has been aimed at many times, and living insects have been brought here, as readers of the RURAL already know, but they have not apparently survived. If the Division of Entomology of the Department of Agriculture can do this, it would be a great blessing.

## THE FIELD.

### The Great Wheat Problem—No. 6.

#### California Growers Give Their Experience and Beliefs.

As promised in last week's RURAL, we continue the publication of reports from wheat growers in all parts of California concerning their experience of the cost of producing wheat and their views of the wheat situation generally. For the reports we are indebted to the California State Board of Agriculture.

#### TULARE COUNTY.

*James M. McClellan, Hanford.*—Wheat costs me per bushel in the sack, including interest at seven per cent upon value of land, etc., as follows:

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| 10 bushels per acre, \$ .53 per bu. | 20 bushels per acre, \$ .31 per bu. |
| 15 " " " " .40 " "                  | 25 " " " " .24 " "                  |

Wheat land in this county is worth from \$30 to \$40 per acre, and in order to make the growing of wheat profitable at one cent per pound, land should yield twelve bushels per acre. About one-half the wheat land averages this amount.

I have had experience in feeding wheat to hogs and I see no reason why it should not be profitable for growers to feed a large proportion of their wheat and market the swine thus fattened. The trouble with us in this section is that only a few of the farmers own the land which they farm; consequently, the rents absorb nearly all the profits at present prices, and, together with rainfall too uncertain to insure a crop, permits many chances for failure.

In the northern part of the county the land is better and the yield is heavier. Many of the farmers are now raising grain at a loss, because each season they think prices will be better.

I submit below some figures taken from the western portion of Tulare county, where I have been farming for five years, beginning in 1889.

|                                          |    |
|------------------------------------------|----|
| 1889—Average yield per acre, 22 bushels. | 24 |
| 1890—Failure.                            |    |
| 1891—Average yield per acre, 2 " "       |    |
| 1892—                                    | 16 |

|                             |                |
|-----------------------------|----------------|
| Total .....                 | 64 bushels.    |
| Average yield per acre ..   | 14.45 bushels. |
| Average price per bushel .. | .39 cents.     |

Cost of farming one acre for five years:

|                  |         |
|------------------|---------|
| Plowing .....    | \$ 2.50 |
| Harrowing .....  | 1.25    |
| Seeding .....    | 1.25    |
| Harvesting ..... | 6.00    |
| Hauling .....    | 1.15    |

Total .....

|                                                      |         |
|------------------------------------------------------|---------|
| Value of grain produced in five years on one acre .. | \$24.90 |
| Cost .....                                           | 12.15   |

|                                                                  |         |
|------------------------------------------------------------------|---------|
| Return per acre .....                                            | \$12.75 |
| Deducting interest on value of land—\$20—at 7% for five years .. | 7.00    |

Net balance per acre .....

I would say in explanation that only a limited section of this county produces these crops, and that is on overflowed land.

*G. A. Heinlen, Lemoore.*—The land in the San Joaquin valley is light and does not produce on an average more than six or eight bushels per acre, and the cost of wheat per bushel in the sack is about sixty cents. This will allow a low rate of interest on value of land. From \$10 to \$40 per acre is the present value of wheat land. A very small proportion of this county could raise wheat profitably at one cent per pound, as it would require a yield of at least twenty bushels per acre. Have had no experience in the use of wheat as feed for animals. It might do to fatten hogs but not cattle.

The land in this part of the San Joaquin valley is of a light, sandy loam and will not produce grain (wheat or barley) without irrigation. The surface of the ground dries out very quickly, and often requires two or three irrigations during a season to produce wheat. Irrigation damages the land very materially, as it leaches it out and causes all minerals to come to the surface, which destroy vegetation the following year.

The surest and most successful crop we raise is alfalfa, which, with irrigation, will yield from four to

eight tons per acre per annum, besides furnishing pasture for stock. Every time the hay is cut and removed the land must be irrigated (flooded with water).

Our best crop is Egyptian corn. The land is irrigated and corn planted. No further attention is required until it is to be gathered. It will yield from one to two tons per acre. Indian corn requires more care and cultivation, while the yield is about the same as Egyptian corn.

As the soil in this county is light and sandy, the products that get their moisture deep in the ground are more sure to bring a return than those that receive nourishment from top of the ground, such as wheat and barley.

*J. W. Davis, Porterville.*—Wheat costs me per bushel in the sack as follows:

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| 10 bushels per acre, \$ .40 per bu. | 25 bushels per acre, \$ .35 per bu. |
| 15 " " " " .38 " "                  | 30 " " " " .34 " "                  |
| 20 " " " " .36 " "                  |                                     |

The present value of land upon which wheat is produced at above cost is from \$8 to \$15 per acre, which should yield, in order to make wheat growing profitable at one cent per pound, at least twelve bushels per acre. On an average, one-fourth of the wheat land in this county now yields this amount.

I have had experience in the use of wheat as feed for animals and, if mixed with either barley or oats, it makes a nourishing food. The greatest drawback we have in this part of the county is the high prices of freight to the seaboard.

*Robert Dougherty, Hanford.*—For three years I have used wheat to fatten hogs, and, if worth four cents on foot, it is more profitable to let them harvest the crop. Feeding more wheat to spring lambs for early market would insure profitable returns.

Wheat costs me per bushel, which includes interest on investment at seven per cent, as follows:

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| 10 bushels per acre, \$ .53 per bu. | 25 bushels per acre, \$ .36 per bu. |
| 15 " " " " .40 " "                  | 30 " " " " .32 " "                  |
| 20 " " " " .38 " "                  |                                     |

Land suitable for wheat raising is worth \$20 per acre; alfalfa land, \$40. The yield per acre to make the growing of wheat profitable at one cent per pound in this county should be fifteen bushels. Should estimate two-thirds of the wheat land now produces this amount.

#### MONTEREY COUNTY.

*John Iverson, Chualar.*—At twelve bushels per acre, wheat costs me fifty cents per bushel, which includes interest at seven per cent upon value of land, the present price being from \$25 to \$40 per acre.

Land should yield from twelve to twenty bushels per acre to make wheat-growing fairly profitable at one cent per pound, and probably, in a fair season, the wheat land in this county would average the above amount.

There is no question about wheat being a first-class feed, either rolled, soaked or steamed. The only trouble is it would revolutionize all former methods of farm life, and people would have to begin anew. I do not think it would be more profitable for growers to feed a large proportion of their wheat, as prices of beef cattle are depressed and hogs not much better. As long as the railroad company charges more to ship wheat to San Francisco (100 miles) than it costs from New York to Liverpool, no disposition can be made of our wheat that will insure growers warranted returns.

If there is no chance for cereals to go up, then transportation must come down or farming cease. Let the Government pass laws that transportation companies must abide by—such laws that it shall be unlawful to charge more for transporting freight going south than it does going north, or vice versa, or to charge more to move freight going east than it does for the same distance going west.

Nothing can save farming industries except the lowering of transportation charges, together with a possible Isthmus canal to bring us nearer to market.

*D. McKinnon, Salinas.*—It costs me fifty-six cents per bushel in the sack to raise sixteen and two-thirds bushels per acre. This includes interest on value of land, etc. One-half of this county will average seventeen bushels per acre, and the other half thirteen bushels. The present price of good wheat land is \$60 per acre, and in order to make wheat-growing fairly profitable in this county at one cent per pound land should yield twenty bushels per acre.

Have had experience in feeding wheat to hogs, and find it puts more fat upon them than any other kind of grain. Four pounds of wheat will make one pound of pork. It would be more profitable for growers to feed a large proportion of their wheat to swine and a small amount to milch cows. At present time it would pay, but I do not know how long it will last.

After the civil war we were a prosperous people, but all kinds of trusts and monopolies followed, getting a corner on what we bought. The producer, by raising good crops and getting fair prices, could stand it. Now we have the reverse, finding new competitors in the British Indies and Argentine Republic. We cannot compete with them and are for the future shut out of the English market, as far as wheat is concerned. At the present price of hogs we can feed wheat to them and make a small profit. It could also be fed to milch or dairy cows mixed with other grain, but in doing so it would have a

tendency to glut the market. So it would follow in anything we might apply it to. What we want is cheap freight and crush the trusts as much as possible.

*Edward Berwick, Monterey.*—Wheat is a very desirable hog feed, especially in conjunction with waste garden and orchard products.

With hogs at five cents per pound, I think it would be more profitable for growers to feed a large proportion of their wheat, and market swine thus fattened. To cattle, I should consider it very doubtful.

Open the Nicaragua canal, to be run by the Government at cost. This will give us about an even chance with the Argentines in reaching the European market. Anything that tends to give the farmer a cent or two more profit relieves the situation. It gives him a chance to buy goods and start the wheels of trade, so that the mechanic gets a chance to eat more wheat and farm produce. As it now is, the farmer has nothing to buy with, consequently all trade is at a standstill.

*William Pinkerton, Pleyto.*—Wheat costs me per bushel in the sack, which includes interest at seven per cent upon value of land, as follows:

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| 10 bushels per acre, \$ .35 per bu. | 25 bushels per acre, \$ .19½ per bu. |
| 15 " " " " .27½ " "                 | 30 " " " " .17¾ " "                  |
| 20 " " " " .21½ " "                 |                                      |

Land should yield fifteen bushels per acre to make the growing of wheat fairly profitable in this county at one cent per pound. With the exception of last year, over one-half yielded this amount. Land upon which wheat can be produced at above cost is valued at \$15 per acre.

I think it would be more profitable for growers to feed a large proportion of their wheat (ground) and market cattle and swine thus fattened. Experience shows me that grinding half wheat with barley goes at least one-third further, and the team will do same work and keep in as good condition. What little I have fed to hogs and cattle gave good satisfaction, and I see no reason why it should not be so used either ground or crushed. I believe the only method to use up the surplus of wheat is to feed more extensively, putting only first quality upon the market. Cattle and hogs always insure good prices. I advocate very strongly the spaying of heifers, calves and sow pigs, as the benefit will be seen when you commence to feed them.

## THE VETERINARIAN.

### Making the New Diphtheria Cure.

The new veterinary college of the University of California has been charged with a very important work very early in its career. The last Legislature appropriated \$6000 for the manufacture of "anti-toxine"—the new dead shot for diphtheria. The money is to be spent and the anti-toxine made by the new veterinary department of the State University, under the direction of the State Board of Health, and the general plan of what is to be done is already formulated.

California is the first State in the Union to take up the manufacture and giving away of the new diphtheria cure. In New York it is being done by the city, which appropriated \$30,000 for the Board of Health there.

The first actual step in preparing for the work of making anti-toxine has been done. The board has under way from both Dr. Behring's laboratory in Germany and Dr. Roux's in Paris a supply of the pure toxine cultures. This stuff is not the remedy, but the pure diphtheria poison itself. It is both the Löffler's bacilli, the cause of diphtheria, and the toxins or the poison they produce. These cultures have been tested there in guinea pigs and are warranted to produce first-class diphtheria and to be absolutely free from any other microbes. This poison is to be used in giving diphtheria, and nothing else, to the horses from whose blood the anti-toxine will be taken.

The French and German cultures will be kept distinct for experiment. There will be a dozen little tubes full of diphtheria from each place, and there will be enough to use on four horses.

The next thing, according to Dr. Anderson's plans, will be to buy three or four healthy horses in the prime of young life, and the veterinary professors will be competent to pick out sound animals. Then there must be a place to keep them. That will be a model stable from a hygienic standpoint. It will probably be in some convenient suburban place. Dr. Bowhill, dean of the college faculty, will be the chief actual worker and superintendent of processes.

When the stable, horses and toxins are ready, the horses will be inoculated with the poison in a weak or attenuated form. In the horse's blood the natural process of nature recently discovered will begin at once. The horse's blood will begin to develop the resistant property called anti-toxine. In a short time a stronger injection of poison will be given and the anti-toxine will develop more strength. The process will be repeated for three or four months, when the horse's blood will resist any quantity of Löffler's bacteria and their poisons. The horse will be "immune," and his blood will have de-



veloped its highest power of immunity. The diphtheria bacilli will be harmless in that fortified blood. A little of this blood will at once do the same work in the human system.

It took six months to work a horse's blood up to this effective degree a few months ago. Now it is done in four months.

All this time the horse will be cared for as if he were another Ormonde—in fact, the care and support of the horses will be the most expensive thing in the whole process. When the time comes, Dr. Bowhill, watched and helped with interest by a lot of doctors and professors, will draw between one and two quarts of blood from the horse's neck and take it to the laboratory of the college at Post and Fillmore streets. When the blood coagulates, the white serum will be drawn off, carefully protected from contamination by bacteria of all kinds. This fluid part of the blood will be the anti-toxine without further preparation except the putting of it in sterilized bottles and possibly adding a very little harmless preventive fluid. It will be ready for injection into the human being.

There will really be much to be carefully done, however. In the first place, it will be tested on guinea pigs. Then for practical use it will be diluted or attenuated into different strengths, measured by "units of immunity." It will be examined and worked with more or less powerful microscopes, and it will be put up in little sterilized vials.

When the horse has given up a half gallon or so of his blood for humanity, he will be weak; but with good board, he will soon be all right, and if everything has worked well, he will be sold for nearly as much as he cost.

"I expect that we shall be ready to make the first inoculation in about four weeks," said Dr. Anderson. "We propose to give away the anti-toxine that the poorest may have the benefit of it. We decided that a scientific veterinarian was the one to do this work. It also requires an expert bacteriologist, and Dr. Bowhill, the dean of the faculty, is such a man."

## THE IRRIGATOR.

### Pump Irrigation.

Mr. H. H. Brown, recently brought from Button Willow a bunch of barley to the office of the Bakersfield *Echo*, that was a surprise. The bunch of barley was a sample from several acres, well headed and measuring five feet and three inches high. With the kind of weather we have been having, says the *Echo*, it will be in condition to cut it three weeks. The land on which it was grown was irrigated in September, plowed and sowed. In about six weeks the grain was irrigated and received nothing more. But it is not the rank growth that is remarkable nor the fact that the grain may be matured enough to cut in March. The fact that is of particular interest to us is that it is an illustration of one of the possibilities of irrigation by means of pumping plants. Mr. Brown is one of several in his locality who have been experimenting with pump irrigation and his results so far are quite gratifying. His well is an ordinary twelve-inch, bored and cased, sixty feet deep, with the water about fifteen feet below the surface. The pump is a Byron Jackson centrifugal No. 4, with a capacity of six hundred gallons per minute. For power he uses an old steam engine obtained second-hand. There is plenty of sagebrush at present for fuel and about two loads on a hay frame runs the engine all day. When the sagebrush is exhausted he proposes to use crude oil, which may be obtained at Asphalto at about ninety cents per barrel. When irrigating directly from the pump he can flood one and one-half acres per day, but when using from the large artificial reservoir which he has constructed much more ground can be flooded. To irrigate trees, vines or crops in furrows from five to seven acres a day can be supplied.

For ranching on a moderate scale, Mr. Brown thinks pumping far ahead of depending upon ditches both in point of economy and reliability.

There are a number of similar plants in operation in the vicinity of Button Willow and Rio Bravo and all are reporting satisfactory results. With the introduction of specially adapted pumps and gasoline engines where fuel is scarce it is more than probable that hundreds of the small ranches will in a few years be independent of increasing water rates or dry ditches. Smaller holdings will have to bring this about and, vice versa, the possibilities in that direction will greatly encourage the small ranch, and it is that care of small things that will mean the increased development and prosperity of the country.

### Irrigation by Subterranean Pipes.

We have often alluded to the impracticability of irrigation by underground pipes, either because of immense cost of pipes properly fixed so that roots could not enter, or by the use of pipes with unguarded openings into which roots enter readily. As so many distant writers allude to sub-earth irrigation as a California practice, it is desirable to state continually that such methods are not used here. The Bakers-

field *Californian* has good comments on the subject which we desire to disseminate widely. It says the subject of sub-irrigation appears to possess a peculiar fascination for many, and no amount of experience on the part of those who have tried this method can convince novices that the idea is utterly and entirely impracticable.

At the first glance sub-irrigation appears to be perfect itself. It refutes every objection that can be urged against the surface application of water. The theory is perfect and as simple as that two and two make four. Thus:

The primary objection of irrigation is to supply moisture to the roots of trees, vines or growing crops. Those roots do not reach the surface, but, on the contrary, have a universal tendency to strike downward. Ergo, the nearer the water is applied to the roots the better will the object sought be attained. Therefore surface irrigation is far less advisable than irrigation beneath the surface. Underground pipes with openings at suitable intervals, through which the water will escape and supply the roots, are accordingly preferable to the surface application of the water in open ditches or furrows, from which it must soak into the soil to a greater or less depth in order to reach the roots to be benefited.

This is a pretty theory, and theoretically it is perfect. There is not a flaw in it. No possible objection can be pointed out. So let us undertake to sub-irrigate and go to large expense in order to lay the necessary pipes. It works like a charm the first season. But the succeeding one it does not do so well, and the third season the trees and vines suffer for lack of moisture and water has to be applied on the surface. What is the matter? A little investigation answers the question. A section of pipe is taken up and found to be completely choked with a mass of rootlets and fibrous growth. Wherever there is the slightest aperture these roots penetrate, and it does not require any great length of time to choke them up so completely that not a drop of water can find its way through them. The experiment has been tried over and over again in California and always with the same result, until the theory has been abandoned for a practice which works well at all times. Underground pipes, with surface furrows, fulfill all the requirements and are recognized as furnishing the only perfect means of irrigating.

## SHEEP AND WOOL.

### California Wool Interests.

Leo L. McCoy, of Tehama county, writes a letter on the wool interest for the "American Shepherd's Year Book" published by Frank P. Bennett, 335 Broadway, New York. We give Mr. McCoy's letter as it quite widely represents the views and recent experiences of California wool men. As a wool growing State, California once stood at the head of the list, with 56,550,973 pounds in 1876, but falling in 1891, to 33,183,475 pounds of wool. As to the number of sheep, Texas is now first, Ohio second, and California third, with about 4,085,000 sheep. With her mild winter climate, California is indeed the most natural grazing State in the Union, and Tehama county is one of the great counties of this wonderful State. Situated in the upper Sacramento valley, the Sacramento river flows through it from north to south. It extends from the summits of the Sierra Nevada mountains on the east, to the summits of the Coast Range mountains on the west. Its fertile valleys are abundantly watered by never-failing mountain streams, which rise in the high mountains, and flow down through the valleys of the foot-hills, and across the great valley of the Sacramento to the river.

*The Best Wool Growing County.*—Tehama county has for a long time been regarded the safest, surest and best sheep raising and wool growing county in the State. Her wools are given separate classes in the markets and command the highest prices. Her wools are well known to the eastern buyers and much desired. Sheep are shorn here twice a year. Six thousand bags of wool a year have been grown in this county and sold in Red Bluff, over 2,000,000 pounds, and bringing the growers about \$400,000. Thousands of mutton sheep have gone to the markets every year, and hundreds of thousands of stock sheep have gone from this county in the past to stock the great ranges of Idaho, Montana, Utah and Wyoming. Her sheep have also gone to Colorado and Arizona, and even to Texas. Large bands of wethers have been driven from here to Wyoming, shipped by rail to Nebraska, there fed corn, then shipped to Chicago, and probably farther East. In 1877 there were assessed in this county 245,369 sheep and 118,092 lambs, and the next year 269,176 sheep were assessed. Think of climate and natural grazing conditions where a single county, in one spring, can raise without a ton of hay or a barn for shelter, 118,000 lambs. On the assessment roll for 1893 there are only 163,000 sheep and 14,692 lambs. Under the fostering influence of the tariff of 1867, the business has been built up in this country till we had in this county about 400,000 sheep.

*Great Decrease of Flocks.*—On account of the low

prices for wool the past few years, which we attribute to the tariff reduction of 1883, and subsequent agitation of the question, some men have been put to the wall, others have sent their flocks to the slaughter house, and embarked in other pursuits, many of which are already over-crowded, and as a result of this decline we now have less than half the sheep we had twelve years ago. And the men who are trying to cultivate lands which are really much better adapted for grazing than agriculture are becoming more and more involved every year. Congress struck a fearful blow at one of the great industries of this country when it made the reduction of 1883, and sounded its death knell when it put wool on the free list.

With wool on the free list, California, as well as the balance of the United States, will in a very few years be out of the sheep business, and give that great and important industry over to South America and Australia. I have not here time to compare the difference in the expense of raising sheep and and growing wool in the United States and these countries; but it is the belief of nearly every intelligent flockmaster that we cannot possibly compete with South America and the Australasian colonies in this industry, and that with free wool we must quit the business. With free wool, sheep will cease to pay running expenses, flockmasters will become discouraged, their sheep will be neglected and their flocks go to ruin. Nothing will go to destruction surer or faster than a band of sheep when not studiously guarded and cared for. They are timid, and everything is a prey upon them.

The wild animals and our neighbors' dogs are after them day and night, and on account of the numbers together they are more subject to disease than other animals. Should this business be once destroyed (and free wool, I think, will do it), Australia, with her 125,000,000 sheep, and South America with 80,000,000 will raise the wool, England will manufacture the greater part of it, and the *rich alone* will be able to wear it. Once destroyed it will take a generation to build it up again.

These are my honest convictions upon this subject, after careful thought and years of observation and experience in the business, and I believe I voice the sentiments of all my neighbors. I own thousands of acres of land and so do my neighbors, upon which we run sheep exclusively, and we have been alarmed at the agitation of the tariff question, and are now discouraged at the passage of the Wilson bill. This tariff question has been of much concern to us; we have invested thousands and thousands of dollars in grazing lands, and have devoted our energies to the business. We are deeply interested in this matter, have laid sentiments and politics aside, and honestly, candidly and frankly believe that free wool will ruin our business and give it to South America and Australia.

## THE VINEYARD.

### California Wines.

At a largely attended convention of manufacturers held in this city last week, Mr. A. Sbarboro introduced a paper on the wine industries of the State, which was highly appreciated, judging by the applause. He began by referring to the depression in the wine industry and the formation of the California Wine Makers' corporation. It had gained control of nine-tenths of the wine of 1893-94, and in a few months raised the price of ordinary wine from 6 cents to 12½ cents per gallon, at which latter figure 6,000,000 gallons of wine have already been sold; and, furthermore, an agreement had been entered into with the principal wine-dealers in the city whereby future prices shall be regulated so as to give a fair living price to the grape growers and wine makers alike. Mr. Sbarboro said:

"The price obtained for wine by the producer and that paid by the consumer has been unreasonably disproportionate. There have been instances where the producer has received 10 cents per gallon for his wine, which, after having been put up in so-called pint bottles, has been sold on the cars and in some hotels as high as \$1 per bottle, thus making the consumer pay about \$10 per gallon for an article for which the producer receives about 10 cents per gallon. It is the aim of this co-operative combination to do away with such unreasonable charges, and at the same time to permit only sound and good wine to be furnished to the consumer; all unsound wine will hereafter go to the distillery. There is room in this State for a very large increase of the wine industry. The 20,000,000 gallons of wine which is now produced annually as an average in this State would be consumed in Italy and France in a single city having the population of San Francisco.

"In former years there was a prejudice against our wines, but now the prejudice has been overcome, especially since it has been admitted by experts and juries at the United States and foreign exhibits that our ordinary wine is far superior to that produced in Europe, and that, with the exception of a few extraordinarily fine wines of France, we can produce here as fine a table wine as is made in France, Italy or Spain."



## THE HOME CIRCLE.

### The Old Trundle Bed.

Oh, the old trundle bed where I slept when a boy!  
What canopied king might not covet the joy?  
The glory and peace of that slumber of mine,  
Like a long, gracious rest in the bosom divine;  
The quaint, homely couch, hidden close from the light,  
But daintily drawn from its hiding place at night.  
Oh, a nest of delight, from the foot to the head,  
Was the queer little, dear little, old trundle bed!  
Oh, the old trundle bed, where I wondering saw  
The stars through the window, and listened with awe  
To the sigh of the winds as they tremblingly crept  
Through the trees where the robins so restlessly slept;  
Where I heard the low, murmurous chirp of the wren,  
And the katydid listlessly chirrup again,  
Till my fancies grew faint, and were drowsily led  
Through the maze of the dreams of the old trundle bed.  
Oh, the old trundle bed! Oh, the old trundle bed!  
With its plump little pillow and old-fashioned spread;  
Its snowy white sheets, and the blankets above,  
Smoothed down and tucked round with the touches of love;  
The voice of my mother to lull me to sleep  
With the old fairy stories my memories keep  
Still fresh as the lilies that bloom o'er the head  
Once bowed o'er my own in the old trundle bed.  
—James Whitcomb Riley.

### A Coward's Heroism.

The walk to school was a pleasant one. Helen sang softly to herself as she swung along the shaded country road with her bag of school-books swaying to and fro on her arm, like a great pendulum of knowledge. At the corner Leonard Green joined her as usual. That was one reason why the walk to school was a pleasant one. Helen and Leonard liked one another thoroughly and with pure school boy and girl frankness.

"Hello! I expected to miss you to-day," cried Leonard. "I had to wait for Aunt Kitty to finish a letter."

"And I had to wait to wash the dishes," said Helen. "It was Mildred's turn to do them, but she began by scalding her hand, poor child, so I had to stop and finish them after I had made the beds. You know we take turns."

"My! Wish I had a brother to take turns with me!"

"Yes; but you would have to share your pleasures, too. How would you like to take turns on your trips to the city? How would you like continually to be taking your choice between some pleasure and the overwhelming blessedness of generosity? Say! How would you always like to feel you must either give up the best end of a thing or else make your brother give it up? H'm?" asked Helen, nodding her head merrily.

"Well, that would be Dobbin's choice," admitted Leonard; "but perhaps we could both go together sometimes. And a thing is always more fun when there is another fellow along. Why! What—what does this mean?" For, chatting carelessly along, they had, in turning a corner, come directly upon a large sign which blocked the road:

*"Dangerous passing!"*

This road is closed for repairs."

"It evidently means that they are repairing the old red bridge that they've been talking about so long," said Helen. "But let's go on! They can't have torn it all up so early in the day, and it's a mile farther around the other way."

"It'll be a mile and a half if we go clear to the bridge and then have to go back."

"But I shan't go back if there is a single plank to cross on!" declared Helen, merrily.

"Then, certainly, we would better take the other road, so you won't be tempted to run too great a risk," said Leonard.

"H'm!" sniffed Helen. "If I'm

not afraid, you needn't be a coward for me! Come on!" The voice was imperative, and the tone scornful. Leonard knew it would be wiser to obey the warning on the signboard, but Helen's scorn provoked him to walk on with her.

"There!" cried the girl, when they came in sight of the old red bridge. "There are the men at work on the bridge. And see! there are planks all the way across!"

"Shore now, Missy, them planks ain't nothin' but the rotten lining," said the foreman. "I wouldn't warrant 'em to bear up under a cat."

Helen went up and tried the end plank boldly with a determined little foot.

"Shore, Missy, they mayn't be that strong all the way across," said the man, dropping his iron and coming towards her. "Ye'd best not try another."

For answer Helen gave a bright little laugh, and, slipping away from all detaining hands, sprang from board to board as lightly as a sunbeam, until she stood on the firm ground at the south end of the bridge. Then she turned, and laughed again at their frightened faces.

"Now, Leonard, show your courage!" she called.

"No, no;" cried the men, hastening to prevent, by force, if need be, this foolhardy attempt. "The lad weighs fifty pounds more. He shall not try it!"

"But the boards did not even bend or crack," said Helen. "They are as firm as they were last week when tons of hay came over, only the top plank's off. Come on, Leonard, or you will be late for school; and I shall tell them all it was because you were such a 'fraid-cat.' Come on!"

"If ye step one fut on that bridge, I wash me hands of all consequences," said the foreman.

"Come on," laughed Helen, "if you are not a coward."

Leonard set his lips firmly. A dare is one of the greatest temptations a boy can meet. The boy who can be brave and strong enough to resist a dare is safe in all manner of temptations. Evil can scarcely reach one clothed with the invulnerable mail of courage to appear a coward for wisdom's sake.

"Shall I come half way to help you?" laughed the sweet, taunting voice.

"No!" shouted Leonard. "I will not run such a risk for the mere nonsense of showing my nerve. I should be ashamed to do it. I will not come one step!"

"Yes, you will!" cried Helen, piqued now to show the strength of her influence over him. "Come, little boy!" she laughed teasingly, as she tripped lightly back over the blackened boards. "Come to school with—"

A crack! a crash! and a scream of terror! The next instant Helen was hanging by her dress and one arm to the beam just below where a treacherous board had broken and let her through. She tried to secure her balance and climb back, but the catching of her dress which saved her from being plunged into the swift flowing river below now held her so securely that she was helpless.

"Arrah! Arrah!" cried the men, wringing their hands in dismay. "Run for a ladder! It'll never do for any man to venture on them rotten boards, where even that light little creatur couldn't go! Run for a ladder or a boat!"

"She'll drop afore ye could get either," muttered another, peering over at Helen's ashen face.

"Give me that rope!" cried Leonard, with unflinching eyes.

One of the men handed it up automatically. To obey such a spirit was instinctive.

"Shore, ye mustn't go a step, enter the bridge, or we'll hev two o' ye in the fix," whispered the foreman, hoarsely.

"Hold this end! Pass it around that tree!" commanded Leonard; and without a moment's hesitation he began to creep cautiously over the skeleton bridge. The men held their breath to watch the brave lad. Once, twice, a

board cracked and almost gave way; but Leonard quickly threw his weight back, and advanced from another direction. When he reached Helen she was too exhausted to help herself; but, by the aid of the rope, they managed at last to draw her back to the safe, firm earth once more. Then how the men cheered! And how proudly they shook hands with the pale young hero!

"Shore, ye've did a big thing ter risk yer own life to save hers, after all her tauntin'," said one of the men, bluntly, but with honest feeling; "but, me lad, the bravest thing ye did was to refuse to run the risk for a mere stump! I wish I had a boy o' me own wid your spirit!"

One of the men had hastened to the nearest barn for a horse and carriage; and poor, foolish little Helen was taken home as tenderly and with as little rebuke as if the accident had not been caused wholly by her own folly.

It was over a week before her strained nerves would admit of her seeing any one. Then she called for Leonard.

"I can't ever tell you how sorry I am that I was such a little goose as to

tempt you by calling you a coward," she said.

"Oh, that was all right. I suppose I really was one," laughed Leonard; "for I nearly fainted from terror the moment I touched the ground with you. If the men hadn't cheered loud enough to scare my senses back again just then, I should certainly have collapsed."

"You saved my life," said Helen; "but you would have saved it so much more easily if I had only heeded your warning. But, Leonard, honestly, I didn't think you a coward for a single minute. I admired you most of all when I was the most scornful; for a boy who can resist a dare to show his courage—and from a girl, too—is a real hero, and I knew it."—H. L. Jerome.

Duty is the one thing on earth that is so vital that it can go through death and come to glory. Duty is the one seed that has such life in it that it can lie as God will in the mummy hand of death, and yet be ready any moment to start into new growth in the new soil where He shall set it.—Phillips Brooks.

## A Temple of Art.



## Not for a Day but for all Time.

Memories of the White City are fading—all but one. Majestic in its beauty the Palace of Art survives to remind mankind of wonders departed. Triumphant over fire and tempest the stately structure stands beside the lake dedicated forever to the service of the people. As a gallery of painting and sculpture it surprised and delighted the nations. As the Field's Columbian Museum it will entertain and instruct multitudes in the ages to come.

A World's Fair in miniature is the museum to-day. While it lasts the public will have before them a vivid reminder of the greater exposition of 1893. It will bring back the vast panorama of splendid exhibits including the fine showing made by

## Dr. Price's Cream Baking Powder

The analysis of Dr. Price's by government experts demonstrated its immeasurable superiority in leavening strength, purity and general excellence and gained for it the Highest Award at the Fair.



Love.

Two shall be born in widely severed homes;  
In native language, each of diverse clime;  
And neither add a faintest seeming trace  
Of happy fragrance to the other's dreams.  
Till, all unknown to restive consciousness,  
The magic something, awakened deep within,  
Shall press them onward, over rolling waves,  
Through frequent dangers nearer and nearer  
still;

To bind them fathom in each other's eyes,  
As light unseals a wistful mystery.

And other two shall journey in the way  
Of peaceful life, so nearly side by side,  
That all along, a slightest closer turn  
Must change the dual courses into one;  
Alike, uncertain if the confidence,  
So long reposed, is more than friendliness.  
Till, in some quiet moment of content,  
A seeming change shall place them hand in  
hand;

A seeming trifle blend their pliant souls  
In tender harmony—and that is love!

—Addison Brainard.

“Taken Prisoner.”

“Speaking o’ house-breakin’ reminds me o’ something,” said Uncle Pete Atkins, as he reflectively cut a quid from a huge plug of tobacco.

“Most of ye was babies then, I reckon, for it was nigh onto thirty years ago,” he added tentatively, scanning the eager faces watching his, for a story from “Old Pete” was one of the many attractions of an evening at the grocery at Belden’s Eight Corners.

“Give it to us straight, Pete,” cried a voice from the pile of dry goods, where the latest comer had made himself comfortable.

“I was a produce dealer down East in them days, and run between Buckeye and Dunkirk, two good markets. Gem Davy kep’ a small place about half way between ‘em, an’ I had considerable deal with him an’ often stayed over night with him. Booneville was a stragglin’ place; Davy couldn’t begin to get such a crowd together of an evenin’ as there is here,” and the narrator surveyed his audience admiringly, “but he was a right good fellow, Davy was, an’ kep’ prime terbaccer for them days.

“Well, fust I knew he up an’ got married. Married a girl he used to go to school with somewhar, that got the name ‘Plucky Jess’ hitched to her before she was out o’ short dresses. Purty gal, too. They fitted up the rooms over the store and went to housekeepin’.

“That fall ther’ was lots of burglaries. Every day we heard o’ one or more, and they didn’t skip the small places, nuther. We had our little joke with Davy—told him he’d got his body-guard just in time, an’ all sech rot. An’ every time he went to the city he’d say to her, ‘Now, Jess, dear, if you’re a bit afeerd to stay alone,’ an’ she’d put her hand over his mouth and assure him she wasn’t a mite afeerd. ‘There’s that dinner horn old Culver left here. If you hear anything suspicious jest raise a winder and blow a blast on that. I’ll bet my boots a feller’d change his mind and make tracks with the heel toward the house,’ said Davy, laughing at his little puss.

“‘Yes,’ said Jess, meekly, and was all the time schemin’ how she could jail the burglar without judge or jury.

“Wall, he did come one night when Davy was gone, as ye might a-knowed he would.

“Jess had got a habit o’ stayin’ down in the store when she was alone, puttin’ her little lamp under a measure, when she’d got things all fixed to her notion, so as she’d be ready for him.

“I forgot to tell ye: Davy’s store hadn’t no cellar, only a shaller pit leading from a huge trap-door by a few steps. Jess opened this trap-door, which was jest at the end of the counter, by the door leading to the back room, an’ that one she left partly open. From her hidin’ place by the front winder she heard the feller at the back door and purty soon she sec a flash o’ light. He set down his lantern, showin’ he knowed the place, and pushed open the door. Jess stood up now an’ listened for the next step. It come; a plunge, a yell an’ a commotion among the butter pots broke the stillness as sudd’n as a clap o’ thunder.

“Jess sprung out, an’ while that air

cellar was blue with curses throwed a pleasant good-night to her prisoner an’ softly shut down the trap, dragging half a barrel o’ sugar on it to make things secure.

“The next mornin’ Jess was up bright an’ airy to send to Buckeye for a sheriff. She was in high spirits an’ waited on customers as gay an’ smilin’ over that feller’s head as if she’d been a jailer all her life.

“Booneville was thirty miles from a railroad, so ye see ’twas a slow job to go to Buckeye an’ back, and the sheriff didn’t get thar till late in the afternoon. But he had lots o’ help to get his prisoner out o’ his dungeon. All the village was thar—an excited crew, I tell ye. As he was led out and Jess got her eyes onto his face, she give a scream an’ fell in a dead faint. ‘Just like a woman,’ some one remarked; ‘begins to feel conscience-struck, now it’s all over.’

“A couple o’ the men carried her upstairs and some o’ the women staid with her. About that time Davy drove up. They all talked to him at once, but he made out to sense enough of it to find something ailed Jess, so he went upstairs three to a time. Jess had come to an’ was wringin’ her hands an’ moaning in a heart-breakin’ way, an’ the women standin’ round with scared faces. When she see Davy she cried out, ‘Oh, poor Bob, poor Bob!’ ‘What! your brother Bob? The devil!’ says Davy.

“‘Yes, I’ve trapped him an’ the sheriff has took him off,’ she said, betwixt her sobs.

“Well, he tried to comfort her, but, in course, it couldn’t be helped. Worse yet, it turned out that Bob was wanted somewhar else, an’ a reward of \$1000 was out for his capture. So, not knowin’ that she was his sister, they brought the money to Jess, an’ she wouldn’t look at it, an’ ordered ‘em out like a duchess. Nobody darst say a word to her about it. One flash out o’ them black eyes o’ hern liked to paralyzed one feller that tried it.

“Davy says to me one day:

“Pete, don’t you think it’s possible Jess was mistaken about that burglar bein’ her brother?”

“‘Lord! yes, Davy, says I. ‘There’s lots o’ folks that looks like somebody else. Why don’t you take Jess up thar to see him?’ says I.

“‘I would before now if I could get her to go,’ says Davy, ‘but she is that cranky I can’t even speak about it. Says she can’t never look Bob in the face again, an’ sech trumpery.’

“Howsumever, in a few days Davy an’ Jess went to Buckeye. Thoughts of a new bunnit kep’ her unsuspectin’ till they drove up to the jail, an’ he whisked her in so quick there wasn’t no chance for a scene. The warden took ‘em round to see the prisoners an’ the upshot on’t was that the one they thought was Bob wasn’t Bob at all, though Jess still stuck to it he looked like him.

“So then Jess was happy again. She got the \$1000 reward, an’ next day she writ to her brother an’ told him the whole story an’ begged him never to be a burglar an’ run the resk of bein’ caught under a trap-door by a woman!”

Curious Facts.

One-eighth the population of Great Britain is in London.

The number of hairs on an adult’s head usually ranks from 128,000 to 150,000.

Italy’s population is very dense, there being 270 people to every square mile of territory.

In Korea umbrellas are of oiled paper, have no handles and are simply worn over the hat.

The only European country which has suffered depopulation in the present century is Ireland.

A traveler who has been as far south as Patagonia and as far north as Iceland says that mosquitoes are to be met with everywhere.

An adult has ordinarily twenty-eight pounds of blood, and at each pulsation the heart sends ten pounds though the veins and arteries.

Fashion Notes.

The collars on the new shirts are made either high or turned over, with the preference for the latter. It is considered very smart to have the collars of white linen, to button on the band with gold studs.

The shirt waists for the coming season do not differ very materially from those of last year. The sleeves are very large, and there is more fulness across the bust. The band around the neck and the collar are higher, but the general effect is not too marked to absolutely condemn last year’s stock if one must consider economy.

Black gowns are reigning favorites at present, and will continue to take the lead throughout the early spring months. Black satin, both figured and plain, diamantine moires, crepons and various kinds of rough wool goods are being made up into spring gowns, with the customary fancy waist, combined with or entirely made of a contrasting color.

A pretty and novel little spring jacket is of brown velvet, cut short over the hips and slightly pointed in front, with a postillion back. The sleeves, which are short, consist merely of a pointed cape of the velvet made almost without fulness, and which when worn has the effect of pressing down the redundant fulness of the sleeves of the dresses beneath. A military collar with military frogs, applied on trefoils of white cloth, finish this very natty-looking little garment.

“Swallow bows” are now taking the place of butterfly bows, and are made in this way: Take a stiff glace ribbon two or three inches wide, and cut one end with long, sharp points like a swallow’s tail. Place a loop below, which represents the thickness of the bird’s body, and then two side ends cut in diagonal points for the wings. With a rosette as a finish this makes a very effective bow. A charming hat trimmed with two of these swallow bows, one on either side, was of black leg-horn, with fluted brim and a full red June rose in each flute.

Wendell Phillips’ Cutting Retort.

Dr. Furness, of Philadelphia, tells a characteristic story about Wendell Phillips. Several clergymen boarded a street-car in Boston one day, and one of them hearing it intimated that Wendell Phillips was in the car, got up and asked the conductor to point him out. The conductor did so, and the minister, going up to the orator, said:

“You are Mr. Phillips, I am told?”

“Yes sir.”

“I should like to speak to you about something, and trust, sir, you will not be offended.”

“There is no fear of it,” was the sturdy answer, and then the minister began to ask Mr. Phillips earnestly why he persisted in stirring up such an unfriendly agitation in one part of the country about an evil that existed in another part.

“Why,” said the clergyman, “do you not go South and kick up this fuss and leave the North in peace?”

Mr. Phillips was not the least ruffled, and answered, smilingly:

“You, sir, I presume, are a minister of the gospel?”

“I am, sir,” said the clergyman.

“And your calling is to save souls from hell?”

“Exactly, sir.”

“Well, then, why don’t you go there?”—Life’s Calendar.

Cuba is one-half larger than Ireland.

DOMESTIC ECONOMY.

**PORK TENDERLOINS.**—Put a tablespoonful of butter in a frying pan to heat, split the tenderloins lengthwise, sprinkle with salt, pepper and flour, and fry till a nice brown, thicken the gravy with browned flour, season with salt, pepper, and, if you like, a little sage, and pour over the tenderloin.

**PRUNE WHIP.**—Soak twenty-one prunes in water over night. The next morning put them into boiling water and boil until the pits fall out. Rub the prunes through a colander, and then stir them into the whites of six eggs beaten to a stiff froth, with four tablespoonfuls of sugar; beat all thoroughly, and bake until a light brown on top.

**LEMON PIES.**—The juice and grated rind of one lemon, three eggs, leaving out the whites of two, one cup of sugar, three tablespoonfuls of flour, and milk enough to fill the plates. Beat the whites of the two eggs and a tablespoonful of sugar to a froth. Spread over the fire when baked; return to the oven and brown slightly. This quantity makes one pie.

**FRIED CHICKENS.**—Thoroughly clean two young chickens, rather older than broilers; cut them into quarters, crack the main bones with a potato masher and flatten the quarters slightly. Lay the pieces into a frying pan. Pour over them four ounces of melted butter, salt and pepper to taste. Put the pan over a quick fire, and fry a delicate brown on both sides. When well browned—but not too dark—drain off most of the butter, dredge over the chicken with half an ounce of flour, rub it well in and pour over them a pint of sweet cream. Shake the frying pan for a time to mix all well together and prevent burning; then cover closely and stew for ten minutes. When done, remove the chicken carefully to a hot platter. Add half a tablespoonful of butter and the juice of half a lemon to the gravy. Stir well, and pour over the chickens. Sprinkle the chicken with minced parsley, and serve at once.

Gems of Thought.

He that cannot forgive others breaks the bridge over which he must pass himself; for every man has need to be forgiven.—Lord Herbert of Cherbury.

When babes begin to see they smile; when a young girl perceives the sentiment of nature she smiles as she smiled when an infant. If light is the first love of life, is not love the light of the heart?—Balzac.

There are two modes of establishing our reputation: to be praised by honest men and to be abused by rogues. It is best, however, to secure the former, because it will be invariably accompanied by the latter. His calumny is not only the greatest benefit a rogue can confer upon us, but it is also the only service he will perform for nothing.—Colton.

We see a world of pains taken and the best years of life spent in collecting a set of thoughts in a college for the conduct of life, and after all, the man so qualified shall hesitate in his speech to a good suit of clothes, and want common sense before an agreeable woman. Hence it is that wisdom, valor, justice and learning cannot keep a man in countenance that is possessed with these excellences if he wants that inferior art of life and behavior called good breeding. A man endowed with great perfections without this is like one who has his pockets full of gold, but always wants change for his ordinary occasions.—Sir R. Steele.

Highest of all in Leavening Power.—Latest U. S. Gov’t Report

**Royal Baking Powder**  
ABSOLUTELY PURE



### Water.

Pure water consists of two parts hydrogen and one part oxygen. Chemical name hydrogen oxide, chemical symbol  $H_2O$ . Pure water is a colorless, odorless, tasteless, transparent liquid, and is practically incompressible. Water freezes at  $32^\circ F.$  and boils at  $212^\circ F.$  At its maximum density— $39.1^\circ F.$ —it is the standard for specific gravities, and one cubic centimeter weighs one gramme.

|                |                                                                                                                                                                                                                      |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 U. S. gallon | 231 cubic inches.<br>8.333 cubic foot.<br>8.34 pounds distilled water.<br>8.34 pounds—in ordinary practice.                                                                                                          |
| 1 cubic foot   | 62.45 lbs. at $39.1^\circ F.$ max. density.<br>62.418 lbs. at $32^\circ F.$ , freezing point.<br>62.355 lbs. at $62^\circ F.$ , standard temp.<br>59.64 lbs. at $212^\circ F.$ , boiling point.<br>57.5 lbs. at ice. |
| 1 cubic foot   | 7.48 U. S. gallons.                                                                                                                                                                                                  |
| 1 pound        | 27.7 cubic inches.                                                                                                                                                                                                   |
| 1 cubic inch   | 0.03612 pound.                                                                                                                                                                                                       |

A column of water one inch square and 2.31 feet high weighs one pound.

A column of water one inch square and one foot high weighs 0.433 pound.

A column of water 33.947 feet high equals the pressure of the atmosphere at the sea level.

One pound per square inch equals a column of water 2.31 feet in height.

0.433 pound per square inch equals a column of water one foot in height.

Water is an almost universal solvent, consequently pure water does not occur in nature. Sea water contains nearly every known substance in solution.

The latent heat of water is 79 thermal units. When water freezes it gives off its latent heat. The latent heat of steam is 536 thermal units. When steam condenses into water it gives off its latent heat.

### Market for American Woods.

Eugene Germain, United States consul at Zurich, has been collecting a mass of information from Swiss manufacturers, builders and shipwrights as to the possibilities for American woods in Switzerland, and this he has embodied in a report to the State Department, giving in great detail the needs of each trade, prices current and other facts, all tending to establish his conclusion that there is an excellent opening in that country for American woods, provided they are of the first quality. The consul gives the names of Swiss importing houses that would be willing to undertake this business upon commission, and thus displace the woods now received from Hungary, Germany and England.

The year 1900 will not be a leap year. Every year is a leap year that is divisible by four, excepting those ending in two cyphers, which must be divisible by 400; thus, 1600 and 2000 are leap years, but 1800 and 1900 are not. Julius Caesar reformed the calendar by making three years of 365 days each follow one year of 366 days, or, in short, every fourth year was made a leap year. This calculation gives an error of about eleven minutes too much each year, which has aggregated now nearly twelve days. In order to obviate this error Pope Gregory, in 1582, declared October 5th to be October 15th, and made the rule that thereafter century years not multiples of 400 should not be leap years. The Gregorian calendar has been adopted in all civilized countries save Russia. This system of intercalation reconciles with much accuracy the civil and solar years. The latter contains 365 days, 5 hours, 48 minutes, 49.62 seconds. By omitting three leap years every 400 years it gives the civil year an average duration of 365 days, 5 hours, 49 minutes, 12 seconds, which exceeds the true solar year by 22.38 seconds, amounting to a day in 3866 years.

The trade winds are the prime motors of ocean currents. They cause a surface drift of no great velocity over vast areas of water in the same general direction as that in which they blow. These drifts, after meeting and combining their forces, eventually impinge on the land. They are diverted and concentrated and increased in speed. They either pour

through passages between islands, as in the Caribbean sea, or are pressed up by the land and escape by the only outlet possible, as, for example, the Strait of Florida, and form a great ocean current like the Gulf Stream.

### How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligation made by his firm.

WEST & TRUX, Wholesale Druggists, Toledo, O. WALKING, KINNA & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75c. per bottle. Sold by all Druggists. Testimonials free.

The "free zone" of Mexico consists of a strip of land twenty kilometers wide, extending along the northern boundary line of Mexico, from the Pacific ocean to the Gulf of Mexico. The strip is about 121 miles in extent and probably includes all the cities and towns in Mexico situated on the border line, the principal ones of which are Nogales, Juarez, Piedras Negras, Matamoros, Nuevo Laredo, and Tia Juana, Lower California. Merchandise exported hence has never been absolutely free of duty in what is termed the free zone; but is, and has been, subject to duty at the rate of ten per cent ad valorem—a rate, however, much less than the regular Mexican duties.

### Mechanical Limits.

However ingeniously a bicycle may be constructed, there are still limits to the strain that may be put upon metal. The advice of the builders of the Halladay-Temple Scorcher is for riders to use a wheel of a pound or more additional weight, and thus be assured of the stability that results from a bicycle properly constructed in all its details. To acquire a clear understanding of these details, and the necessary knowledge required in selecting a wheel with judgment, one can hardly do better than to send to O. S. Potter, 48 Fremont street, San Francisco, for the handsome catalogue of the Marion Cycle Co.

## THE OWEN ELECTRIC BELT



Trade Mark—Dr. A. Owen

### FOR MEN AND WOMEN

The latest and only scientific and practical Electric Belt made, for general use, producing a genuine current of Electricity, for the cure of disease, that can be readily felt and regulated both in quantity and power, and applied to any part of the body. It can be worn at any time during working hours or sleep, and

### WILL POSITIVELY CURE

**RHEUMATISM  
LUMBAGO  
GENERAL DEBILITY  
LAME BACK  
NERVOUS DISEASES  
CHRONIC DISEASES  
AND FUNCTIONAL  
DERANGEMENTS**

### WITHOUT MEDICINE

Electricity, properly applied, is fast taking the place of drugs for all Nervous, Rheumatic, Kidney and Urinal Troubles, and will effect cures in seemingly hopeless cases where every other known means has failed.

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Bruises,  
Burns,  
Wounds,

Swellings,  
Soreness,  
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All Aches,  
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...WHAT MORE IS NEEDED THAN A PERFECT CURE...

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OUTHOUSES, SHEDS AND DWELLINGS WITH

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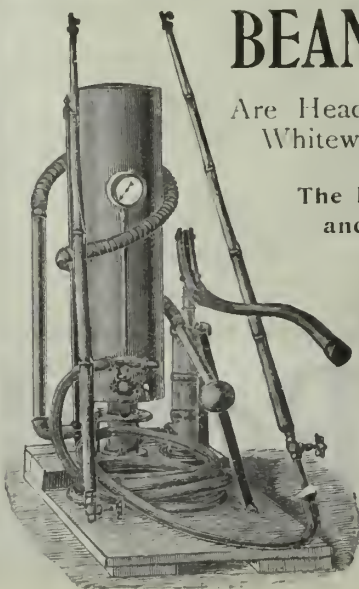
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Nozzles arranged to spray at any angle ordered.

THE BEAN CYCLONE NOZZLE—a new invention this season—is self-cleaning and throws a fine and penetrating spray.

The BEAN and NEW BEAN NOZZLES, so well known, are also our invention.

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Los Gatos, Cal.

## Seeds, Plants, Etc. PACIFIC NURSERY.

Office and Greenhouses:  
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Monterey Cypress, Blue and Red Gum in boxes, transplanted, \$1.25 & 100, \$10 to \$12.50 & 1000  
Palm California, Japan and Australian Fan Palm, Phoenix (Date Palm), Dracenas, and a large assortment of evergreen trees, deciduous trees and shrubbery, Azaleas, Indica and Mollis, Camellias, Rhododendron, Fuchsias, at low prices. F. LUDEMANN.

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Of My Own Raising---Postpaid.

ADAMS' HYBRID SQUASH, large pkt., 10 cts.; 1 lb., 20 cts.; 1 lb., 60 cts.  
OLD HOMESTEAD POLE BEAN, large pkt., 10 cts.—in pkts. only.  
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FRENCH PRUNE, BARTLETT PEARS, Apple, Peach, Cherry, Apricot and Almond TREES.

First-Class Trees at very low prices.

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ALL KINDS OF NURSERY STOCK. Send for our Book on Olive Culture.

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For prices and a pamphlet on Olive Culture, address

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## Olive Trees for Sale

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| Mission, 3 years.         | 5 to 6 feet. |
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We are the only seedsmen making the growing of farm seeds, grasses and clovers a great specialty. Our Extra Grass and Clover Mixtures last a lifetime without renewal. Prices dirt cheap. Mammoth farm seed catalogue and sample of Grass Mixture free for 7c. postage. JOHN A. SALZER SEED CO., La Crosse, Wis.

ACRE APPLES, \$1,493 Write NURSERIES AND ORCHARDS, Louisiana, Mo., for free sample copy telling about it. A practical Fruit and Farm paper, published by Stark Bros., 40c a year; circulation, 40,000 copies. The "Cream of the Cream"—gives the busy Fruit Grower or Farmer, who hasn't the time or the money to buy and read a great mass of papers, what is best from them all, what he wants to know.

## Orange Culture in California.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thomas A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well printed and bound book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

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The most Complete Assortment of General Nursery Stock grown on the Pacific Coast.

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Starr, the largest early apple, 12 in. around, marketable 1st week in July; Paragon, Parlin and others. Koonce Pear, early, handsome and delicious. Lincoln Coreless, very large and very late; Seneca, Japan Golden Russet, Vt. Beauty, &c. Japan Quince Columbia unequalled for jelly. Nuts—Parry's Giant, 6 in. around, the largest known chestnut; Paragon, Numbo and many others. Walnuts—French, Persian, Japan, English and Am. Pecans, Almonds and Filberts, Blacanus Longipes, Japan Mayberries, Hardy Oranges; Dwarf Rocky Mt. Cherries, free from insects, black knots and other diseases; Small Fruits, Grapes, Currants, &c.; Shade Trees, Ornamental Shrubs, &c. CATALOGUE FREE.

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### Money Value of Hands and Fingers.

According to a scale drawn up for the Miners' Union and Miners' Accident Insurance Companies of Germany, the loss of both hands is valued at 100 per cent, or the whole ability to earn a living. Losing the right hand depreciates the value of an individual as a worker 70 to 80 per cent, while the loss of the left hand represents from 60 to 70 per cent of the earnings of both hands. The thumb is reckoned to be worth from 20 to 30 per cent of the earnings. The first finger of the right hand is valued at from 14 to 18 per cent, that of the left hand at from 8 to 13.5 per cent. The middle finger is worth from 10 to 16 per cent. The third finger is valued at no more than 7 to 9 per cent. The little finger is worth 9 to 12 per cent. The difference in the percentages is occasioned by the difference with the trade, the first finger being, for instance, more valuable to a writer than to a digger.

SOME PEOPLE insist that when an oak forest is cut down pines spring up, and that oak follows pine, and so forth; but this never occurs except where the two kinds are not far from each other. In localities where but one kind exists that kind succeeds itself. An intelligent Nevada correspondent notes that where the pine timber was cut away twenty years or so ago, fine young trees, apparently about fifteen years old, now cover the same area. They grow so slowly when young, she says, that few observe them, but after a few years they grow rapidly. It is about the sixth or seventh year before they start on the rapid growth.

### Enterprise Raisin Seeder.

The raisin seeder, illustrated herewith, is a valuable addition to the already large line of labor-saving machines, manufactured by the Enterprise Manufacturing Company, Philadelphia, Third and Dauphin streets. It is simple, easily adjusted, does the work rapidly and effectually, seeding raisins wet or dry, better work being obtained if wet.



Seeding raisins is very tedious work, but by the use of the family size seeder, a pound can be seeded in less than five minutes, and with the hotel size still more rapidly.

THE Atlantic and Pacific is getting the cream of hauling the California fruit crop. Five and six through trains of oranges and dried fruit pass through Winslow, Arizona, daily.

THROAT DISEASES commence with a Cough, Cold or Sore Throat. "Brown's Bronchial Troches" give immediate and sure relief.

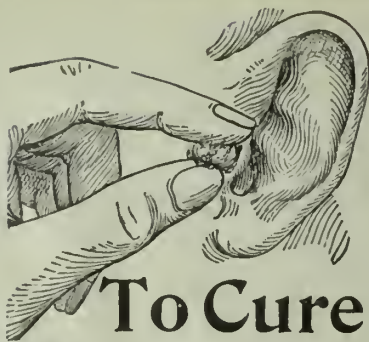
THE Canadian Pacific railway earnings for the week ending March 7th were \$264,000; for the same period last year, \$308,000. This is a decrease of \$44,000.

### Horse Owners! Try GOMBAULT'S Caustic Balsam



A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.  
THE LAWRENCE-WILLIAMS CO., Cleveland O.

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All kinds of tools. Fortune for the driller by using our Adamantine process; can take a core. Perfect Economical Artesian Pumping Rises to work by Steam, Air, etc. Let us help you. THE AMERICAN WELL WORKS, Aurora, Ill.; Chicago, Ill.; Dallas, Tex.



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Saturate a piece of cotton with Pain-Killer and place it in the ear. The pain will quickly cease. To cure toothache, place the cotton in the hollow of the tooth, and bathe the face with

### Pain-Killer

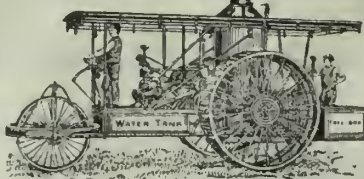
This good old remedy will cure any ache or pain that ever attacked the old or young. Miners, Stockmen, and everyone who is not within calling distance of a doctor should never be without a bottle of Pain-Killer. Sold everywhere. The quantity has been doubled, but the price remains the same. Get a bottle at once.  
PERRY DAVIS & SON, Providence, R. I.  
Sole Proprietors.

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For FIELD and FARM  
HUMANE—STRONG—VISIBLE—ECONOMICAL  
Holds but DOESN'T HARM your stock. Can be built to STAY TIGHT all seasons. Get circulars & estimates from dealers or  
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For Beautiful Calendar, send 4 cts. in stamps.

In answering advertisements mention this paper.

### Price's Traction Engine.



We have one of these engines that was used about one month last season and was taken back by us by reason of illness of purchaser. Engine is in perfect order, and in better working order than when first sent from the factory. A BARGAIN. Indicated power, 80-horse; Cylinders, 8x8; Wheels, 8 ft. high, 28 in. wide; weight, less than 10 tons. Price when new, \$4500.

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Gold and Silver Watches, Bicycles, Tricycles, Guns and Pistols, Cars, Buggies, Wagons, Carriages, Buses, Sleighs, Harrows, Cart Tops, Bldgs, Sewing Machines, Acorns, Organs, Pianos, Elder Mills, Cash Drawers, Feed Mills, Stoves, Kettles, Bone Mills, Letter Presses, Jack Screws, Trucks, Axes, Hay Cutters, Press Blanks, Copy Books, Vises, Drills, Road Plows, Lawn Mowers, Coffee Mills, Lathe, Benders, Dump Carts, Corn Shellers, Hand Lamps, Pencils, Scrapers, Wire Fences, Fanning Mills, Winches, Engines, Saws, Steel Sinks, Grate Dumps, Crow Bars, Nailers, Tools, Bit Braces, May, Stock, Elevator, Rail Road, Platform and Counter SCALES. Read for free catalogue and see how to save money.  
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FOR SEVENTY-FIVE DOLLARS

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### To Orange-Growers.

The largest crop and best grade of fruit can only be obtained by using fertilizers containing

Not Less than 12% Actual Potash. (K<sub>2</sub>O)

This is equally true of pine-apples and other tropical fruits.

Our books on Potash are sent free. They will cost you nothing to read, and will save you dollars.  
GERMAN KALI WORKS, 93 Nassau Street, New York.

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Weight per Rod,  
Not Price per Pound,  
Makes the Cheap Fence.

100 Rods of Waukegan  
Weigh only 90 Pounds.

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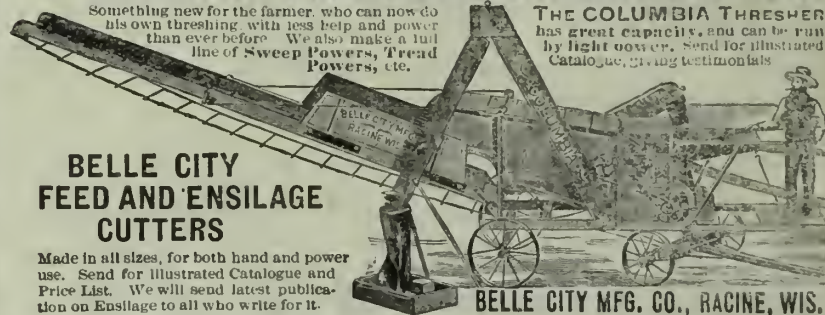
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### A SMALL THRESHING MACHINE.

Something new for the farmer, who can now do his own threshing, with less help and power than ever before. We also make a full line of Sweep Powers, Tread Powers, etc.

THE COLUMBIA THRESHER has great capacity, and can be run by light power. Send for illustrated Catalogue, giving testimonials.



### BELLE CITY FEED AND ENSILAGE CUTTERS

Made in all sizes, for both hand and power use. Send for illustrated Catalogue and Price List. We will send latest publication on Ensilage to all who write for it.

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### Protect Your Trees

—WITH—

### Gilman's Patent Tule Tree Protector.

PATENTED AUGUST 1, 1893.



PATENTED  
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FIRST PRIZE—Medal and Diploma—California Mid-Winter International Exposition. Cheapest, best and only one to protect trees and vines from frost, sunburn, rabbits, squirrels, borers and other tree pests. For testimonials from parties who are using them, send for descriptive circulars.

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Sole Manufacturer of Patent Tule Covers.  
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### If you want Power or Pumps

Investigate the

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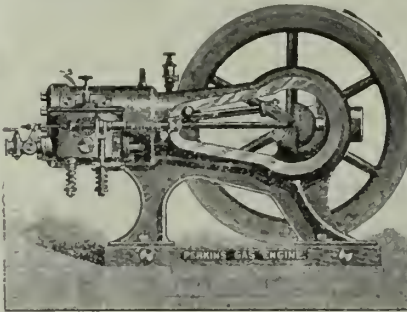
GAS, GASOLINE or OIL ENGINES,

Also PUMPING MACHINERY.

Prices, according to capacity, \$300 and upwards. Give full particulars for close estimates. Write for catalogue.

PERKINS PUMP & ENGINE CO.,

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work of five or six men. The proof of this can be found in the Planet Jr. book for 1895 which describes and pictures 20 different Planet Jr. machines. The reading of this book is the first step toward doing better. It's Free.  
S. L. ALLEN & CO., 1107 Market Street, PHILADELPHIA.

You can tire out a man but you can't tire a Planet Jr. machine. A man gets careless, loses energy, has his dull days, a Planet Jr. machine is ever ready for business. A man often leaves when worst wanted, a Planet Jr. machine never goes back on you. One man can do but one man's work, a Planet Jr. Double Wheel Hoe will do the



S. F. MARKET REPORT.

Market Review.

SAN FRANCISCO, March 27, 1895.  
WHEAT—The demand for export purposes is not of very positive character. At the same time, buyers are promptly found for all suitable offerings at current figures. There is not much inclination to lay in heavy stocks, as there is possibility of the syndicate wheat being dumped on the market at any time. Such an event would tend to create a soft market. This interest is credited with owning from 200,000 to 250,000 tons. Sooner or later, it is likely to be crowded to sale, when buyers could probably operate to good advantage. No. 1 shipping wheat is quotable today at not over 85¢ per cwt, with easy tendency. Choice lots would bring a trifle more, say 86¼¢. Milling grades are unchanged at 88¼¢@92¼¢ per cwt.

BARLEY—Sample trade is very slow, the demand being limited almost wholly to local wants, which are of jobbing character. Receipts are small, but prices lack firmness, the situation being largely in favor of buyers. Recent rains have dampened speculative operations, and business in the Call Board is not of any magnitude. Growing crops are said to be looking fine. We quote: Feed, fair to good, 75¢@76¼¢; choice, 77¼¢; Brewing, 85¢@90¢ per cwt.

OATS—Milling Oats of choice character are none too plentiful, but with ordinary feed qualities the market is abundantly supplied. The volume of business is not heavy, though sufficient to keep matters in moderate motion. We quote: Milling, 107¼¢@117½¢; Surprise, 107¼¢@117½¢; fancy feed, 102¼¢@105¢; good to choice, 95¢@101¢; fair to good, 90¢@95¢; poor to fair, 85¢@87¼¢; Black, 100¢@102¼¢; Red, 100¢@102¼¢; Gray, 95¢@101¢ per cwt.

HAY—We quote: Wheat, 85¢@102¢; Wheat and Oat, 85¢@115¢; Oat, 89¢@111¢; Alfalfa, 88¢@99¢; Barley, 88¢@100¢; Clover, 88¢@99¢; Compressed, 88¢@101¢; Stock, 86¢@97¢ per ton.

STRAW—Quotable at 70¢@80¢ per bale.

FEED—Manhattan Horse Food (Red Ball Brand) in 100-lb. cabinets, 88¢; Manhattan Egg Food, 100-lb. bags, 111¢ 50.

BEANS—We quote as follows: Bayos, 11¢ 70¢; 1 90; Butter, 12¢ 25 for small and 12¢ 25@2 50 for large; Pink, 11¢ 75¢@1 90; Red, 11¢ 60¢@1 85; Lima, 11¢ 50¢@1 60; Pea, 12¢ 75¢@2 95; Small White, 12¢ 75¢@2 95; Large White, 12¢ 60¢@2 80; Blackeye, 13¢ 25¢@3 50; Red Kidney, 12¢ 75¢@3; Horse, 11¢ 60¢@1 70 per cwt.

POTATOES—We quote as follows: New, 2¢@3¼¢; Early Rose, 40¢@50¢; River Reds, 25¢@30¢; Burbanks, 45¢@50¢; Oregon Burbanks, 60¢@61¢; Salinas Burbanks, 75¢@81¢; Sweet, 11¢@1 25 for Rivers and 12¢@2 50 per cwt for choice stock.

ONIONS—The market is not overstocked with the better qualities. Quotable at 75¢@1 15 per cwt. Some fancy Oregon will bring 11¢ 80¢@1 35 per cwt. Cut Onions sell at 40¢@65¢.

VARIOUS—We quote: Cucumbers, 50¢@1 10 per doz; Asparagus, 11¢@1 50 per box for the general run and 11¢ 75¢@2 50 for fancy; Rhubarb, 40¢@75¢ per box; Green Peas, 30¢@50¢ per lb; Green Peppers, 12¼¢@25¢ per lb; Turnips, 50¢ per cwt; Beets, 60¢@75¢ per sack; Carrots, 30¢@50¢; Cabbage, 50¢@60¢ per cwt; Garlic, 30¢@3¼¢ per lb; Cauliflower, 30¢@40¢ per dozen; Marrowfat Squash, 11¢@15¢ per ton; Hubbard Squash, 10¢@12¢ per ton; Dried Peppers, 12¼¢@15¢ per lb; Dried Okra, 12¼¢ per lb.

FRESH FRUIT—We quote: Apples, 50¢@1 11, with 11¢ 25¢@1 50 for fancy.

CITRUS FRUIT—The market is more than comfortably supplied with Oranges, but full prices are obtainable for goods without blemish. We quote as follows: California Navels, 11¢ 50¢@2 75; Seedlings, 75¢@1 50 per box; Mexican Limes, 15¢ 50¢@6 per box; Lemons, Sicily, 13¢@14; California Lemons, 11¢ 50¢@2 for common and 12¢ 25¢@3 for good to choice.

DRIED FRUIT—Following are the prices furnished by the Fruit Exchange. The figures presented represent carload lots, small parcels occasionally selling at slightly lower rates:

Apricots—Fancy Moorpark, 8¢; choice, 10¢, 7½¢; fancy, 7¢; choice, 6¢; standard, 5¼¢; prime, 5¢.  
Apples—Evaporated, 5¼¢@6¼¢; sun-dried, 4¢@5¢.  
Peaches—Fancy, 7¢; choice, 6¼¢; standard, 5¼¢; prime, 5¼¢; peeled, in boxes, 12¢@13¢.  
Pears—Fancy, halves, 5¼¢@quarters, 4¼¢; choice, 4¼¢; standard, 3¼¢; prime, 3¢.  
Plums—Pitted, 4¢@5¢; unpitted, 1½¢@2¢.  
Prunes—Four sizes, 4¼¢@4½¢.  
Nectarines—Fancy, 7¢; choice, 6¼¢; standard, 6¢; prime, 5¼¢.  
Raisins—In sacks (50-lb. boxes selling at 14¢ per lb. higher): 4-crown, loose, 4¢; 3-crown, 2¼¢; 2-crown, 2¢; seedless Sultanias, 3¢; seedless Muscates, 2¢ per lb; 3-crown London Layers, 11¢ 25 per box in 20-lb. boxes; clusters, 11¢ 50; Dehesa clusters, 12¢; Imperial clusters, 13¢; 4-crown, loose, 11¢ 15; 4-crown, loose, faced, 11¢ 25 per box.

BUTTER—The market continues to incline in favor of buyers, the supply still being in excess of market wants.

Creamery—Fancy, 14¢@15¢; seconds, 13¢@13¼¢ per lb. Dairy—Fancy, 12¢@12¼¢; good to choice, 10¢@11¢; fair, 8¢@9¢; store lots, 6¢@7¢.

CHEESE—We quote: Choice to fancy, 7¢@8¢; fair to good, 4¼¢@6¢; Eastern, ordinary to fine, 10¢@14¢ per lb.

EGGS—Are a little firmer in price. Quotable at 12¼¢@14¢, with sales reported at 15¢ per dozen for selected.

POULTRY—Trade is not brisk, and sales drag, buyers having the advantage. We quote as follows: Live Turkeys—Gobblers, 9¢@11¢; Hens, 10¢@12¢ per lb; dressed Turkeys, 12¢@14¢ per lb; Roosters, 14¢@15¢ for old, and 16¢@17¢ for young; Broilers, 13¢@14¢ for small and 15¢@16¢ for large; Fryers, 16¢@17¢; Hens, 14¢@15¢; Ducks, 15¢@17¢; Geese, 11¢ 25¢@1 75 per pair; Pigeons, 11¢ 50¢@2 per dozen.

WOOL—Receipts are coming to hand more freely, and greater activity in business is to be reasonably expected in the near future.

We quote Spring: San Joaquin, year's staple, 14¢ 40¢; Do, seven months, 14¢ 40¢; Calaveras and Foothills, 15¢ 40¢. We quote Fall: Southern & San Joaquin, light and free, 15¢ 60¢; Do, defective, 13¢ 40¢.

Orange Trees for Sale.

Ten thousand budded Orange trees, Navels, Med. Sweets and Parson Brown, budded from trees which gained first prizes at Midwinter Fair, to be sold at great bargains. Address J. Parker Whitney, Rocklin, Placer Co., Cal.

NOTICE.

THE ANNUAL MEETING OF THE STOCK- holders of the Grangers' Business Association, a corporation, for the election of a Board of Directors, and for the transaction of such other business as may properly come before it, will be held at No. 106 Davis street, San Francisco, at 10 o'clock A. M., WEDNESDAY, April 10th, 1895. I. C. STEELE, President. CHARLES WOOD, Secretary.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING MARCH 12, 1895.

- 535,662.—FRUIT EVAPORATOR—A. H. Blackburn, Petaluma, Cal.
  - 535,663.—CHIMNEYS—A. H. Blackburn, Petaluma, Cal.
  - 535,668.—LOCOMOTIVE—M. B. Bulla, Yuma, A. T.
  - 535,674.—BICYCLE—C. A. Coey, Fairfield, Wash.
  - 535,683.—ORE CRUSHER—W. G. Dodd, S. F.
  - 535,684.—CAR COUPLING—W. Dunlap, San Diego, Cal.
  - 535,694.—CAN HEADER, ETC.—J. W. Gheen, Portland, Or.
  - 535,445.—PHONOGRAPH—L. W. Glass, S. F.
  - 535,588.—FOUNTAIN PEN—P. D. Horton, Oakland, Cal.
  - 635,541.—BATTERIES—A. Hough, S. F.
  - 535,805.—RAILWAY TOOL—B. Molloy, Golconda, Nev.
  - 535,718.—RESPIRATOR—R. Nagler, S. F.
  - 535,770.—WOODEN STOPPLES—R. F. Radebaugh, Tacoma, Wash.
  - 535,771.—CUTTING MACHINE—F. J. Richards, Needles, Cal.
  - 535,742.—LADDER—Thos. Sooy, Gridley, Cal.
  - 535,424.—DRAG SAW—A. T. Stimson, Bayside, Cal.
  - 535,634.—CHIMNEY CAP—F. C. & H. A. Stober, Sacramento, Cal.
  - 535,635.—CARD RECEIVER—J. T. Stone, Oakland, Cal.
  - 535,472.—PUNCH AND DIE—N. Troyer, Astoria, Or.
  - 535,474.—EGG BEATER—C. H. Warrington, Stockton, Cal.
- NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible by mail or telegraphic order. American and Foreign patents obtained, and general patent business for Pacific Coast Inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

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CALVES, YEARLINGS AND TWO-YEAR-OLDS.

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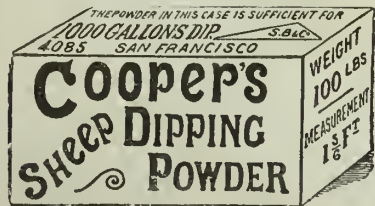
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BARRED P. ROCKS, Brown Leghorns, Black Minorcas and Mammoth Pekin Ducks. In these varieties I have taken great pains in securing the best prize winners in New York and Mass.; besides, I have won highest honors at the State shows. I invite every one interested to visit my ranch and see America's best bred fowls. Reference, People's Bank, or any of my neighbors. Santa Cruz, Cal. J. W. Forgeus. Eggs, \$2 per setting, or three settings for \$5.

BUFF LEGHORNS.—Eggs from prize winners, \$1, \$2 and \$3 per thirteen. Incubator lots at reduced rates. C. W. Hansen, San Mateo, Cal.

J. R. CATLETT, Pleasant Grove, Cal., breeds only S. C. Brown Leghorns. Eggs for hatching, 50c per 13, or 11 settings for \$5. Satisfaction guaranteed. Can be had at T. Lynns, 1401 O St., Sacramento, Cal., or J. R. Catlett, Pleasant Grove.

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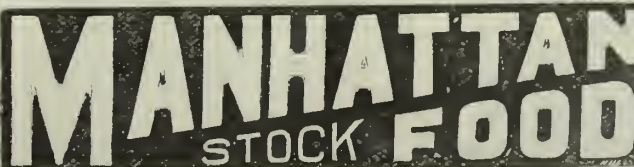
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## Patrons of Husbandry.

### A Visit to Stockton Grange.

Stockton Grange, No. 70, has long held an honorable standing in the order of Patrons of Husbandry in California. It was organized in the early days of the Grange movement; its jurisdiction is one of the richest agricultural districts of California; it was for long years the leading subordinate Grange, in point of numbers, and it has always enjoyed a special character from the devotion and ability of its leading members. Its career, too, has been marked by many distinctions. On two occasions at least it has entertained the State Grange at its annual session. In years past it gave a Master to the State Grange—one whose devotion to Grange principles and energy in Grange work are universally applauded. The brightest pen in the field of California Grange literature has been that of a good sister of Stockton. At all times and in all ways Stockton Grange has been not merely a respectable, but a really potent and leading figure in the Grange world.

These facts were in my mind as I entered the Grange hall last Saturday as a fraternal visitor. I looked forward to an occasion of special profit and pleasure; and was not disappointed. There was no lack of warmth in the greeting; and the session, which lasted nearly three hours, was full of interest. The principal business was a discussion of the co-operative insurance law now awaiting the signature of the Governor. This measure is one with which Grange efforts have long been identified. Two years ago, by the force of Grange influence, it was put through both Houses of the Legislature, but was vetoed by Gov. Markham at the behest of the insurance companies. This year it has again been passed, and is now in the hands of the Governor. It was felt that the voice of Stockton Grange might have some weight with Gov. Budd; and with this hope a resolution prepared by the Worthy Master Beecher and introduced by Sister Lou Overhiser was carried by unanimous vote. It asked the Governor to approve the measure, leaving the courts to determine all questions as to its constitutionality; and that no element of persuasion might be lacking Worthy Master Beecher was instructed to carry it to Sacramento and personally present it to the Governor.

Following this proceeding there was a series of readings under the leadership of the Worthy Lecturer. Each of half-a-dozen members had been asked to come prepared to read some choice literary selection; and most of them responded. The result was an entertainment, perhaps twenty minutes in length, in which the best current literature, both in prose and verse, was the central interest. It struck me as a very simple and yet very effective way to provide profitable and pleasant entertainment. Under such a system there need never be a dull Grange meeting.

The Grange is always polite to visitors, and I was asked to speak. But I shall not trouble the readers of the RURAL with details. It is enough to say that there was a general discussion of the conditions and prospects of the Order, in which, besides myself, Brothers Overhiser, Beecher, Woodworth, Sister Lou Overhiser and others took part. A vast amount of ground was gone over, and there was general agreement that the Grange was suffering from the want of definite aims and active leadership.

By request, Worthy Master Beecher gave a detailed account of his experiences in the inspection work. He has already once gone over the larger part of his territory and is preparing to go

again. His method is to visit each member prior to his meeting, and his plan is not only to drill them in the work, but to revive interest in the purposes and principles of the Order. That it was sometimes disheartening work he did not deny, but he showed no signs of discouragement. The most adverse fact encountered by Mr. Beecher was the lack of young blood in the Order. The problem of the Grange, he declared, is the task of attracting to the Grange hall the youthful and more vital elements of population. He found everywhere that the interest was largely confined to those who started with the Order twenty or more years ago. This element he declared to be immensely valuable; this it is that gives stability and character to the Grange; but, he declared, newer blood is needed to do for the Grange in 1895 what its gray-haired fathers and mothers did for it in 1875. Wherever he had been it had been his effort to bring in a new and vital element, but it was hard to accomplish anything, for a variety of reasons. While the Grange had been idle, other Orders had occupied the ground, and the only hope of success was to enter the work in a spirit which delays and difficulties could not overcome. He had no question about ultimate success, but a persistent effort would have to be made.

I am free to confess that I have not recently heard a Grange note which to me sounded so hopeful as Mr. Beecher's remarks. As he recounted the obstacles his work had met, and after all declared his resolution to persist in it, the thought occurred to me that here was the sign of a new spirit and a new force in Grange work in California. I could but reflect upon the growth which would follow the application of such zeal, intelligence and industry; and turning to an old and eminent brother, I asked: "If during recent times we had had such resolution and force in the leadership of Grange affairs in California, would the order be in the plight in which it finds itself to-day?" His response was an emphatic negative.

Saturday night and Sunday I spent in visitation with Grange brethren in and about Stockton and gathered much information which I feel to be important. Strong as Stockton Grange is, it has not escaped the decline which appears to have seized upon the order everywhere in California. Its membership, once proudly numbering close upon three hundred, has run down to ninety and odd. The average attendance upon its weekly meetings is about forty. The Grange shows no signs of dissolution, but it is hard to keep up the interest. New members are few, and, such as there are, are usually attracted by the minor features of the order. I asked one of the leading officials if Stockton Grange has maintained itself as a practical and effective representative of the farming element. He said no; that it held the allegiance and still commanded the affections of its old members; but it did not seem to attract active men of active affairs as it used to. Asked further as to the reasons, he said that in times like these, farmers were unwilling to take up with anything which did not promise some specific business advantage.

I talked, on Saturday night and Sunday, with a half score or more members of the Grange and asked each one to explain the curious lethargy of the order. In answer, I got a wide variety of theories. In the beginning, many joined the Grange with business hopes, which could not be fulfilled. These dropped off one by one. Others joined the Grange in the hope of political advantage; and these, too, soon dropped out. It was in the years which followed that the Grange, under the leadership of Steele, Flint, Webster, Johnson and others, grew into a body of close friends. But it has not seemed able to build upon this foundation, excellent as it is. Somehow, there is an absence of positive aims. There seems nothing of definite advantage to offer new members. When one comes to invite a neighbor to join, he finds it difficult to make it clear that

any advantages will follow. The trouble is that the Grange is doing nothing in a systematic, practical way to promote the farmers' business interests. "I hold," said one veteran member, "that our Grange has suffered greatly from neglect. I cannot remember when we have had anything like a real helpful lift at the hands of the State or National Grange authorities. A visit now and then and an address once in a blue moon is entertaining enough, but it does not help us in any permanent way." "We have suffered a good deal," said one wise sister, "from bickering over questions which could not possibly be settled in the Grange. We have very often forgotten that controversy convinces nobody and have made the mistake of spending whole meetings in ways which yielded nothing but weariness and bad temper. I think the discussion of political questions is one of the quickest ways to destroy the fellowship which is essential to every well-regulated Grange." Another sister—I find that it is usually the sisters who do the most thinking about Grange matters—declared that the ceremonial of the Grange was a hindrance to its popularity, especially in busy times. "Our men folks," she said, "say that too much time is wasted in ceremonies which have grown tiresome from long familiarity. Farmers come to town to trade and get some contact with others; and some of our old members do not scruple to say that they can spend the time more pleasantly and profitably on the street than in the Grange hall, where too often hours are wasted in disputes over unessential matters." A brother whose parents went into the Grange at the beginning, and who came into it himself when a boy, said: "I owe more to the Grange than I can ever tell. It has opened up to me opportunities and advantages of the highest value, and I shall never give it up so long as there is anybody to meet with; but I will confess that I find it hard to explain to others what they can gain in the Grange. I wish the Grange could have a stirring up which would make it the power it used to be."

I might fill the page with quotations, but have given enough to illustrate the conditions and the spirit which prevail at Stockton. The members are devoted to the order; they have within their membership, reduced as it is, the elements of great potentiality; but they are not satisfied with a dull routine of Grange ceremonies. They are ready to go to work in dead earnest; and all they need is such help as a general gives to an army. Give Stockton Grange a definite aim toward practical ends; then give it the command "Forward," and my word for it, it will show as much enthusiasm as ever it did. Under such conditions, its ninety and odd members will grow to two hundred in twelve months. But it must have the plan and the leadership.

The inspection system is going to do much for the Grange. It is stirring up the dry bones wonderfully. But it will last only a few weeks and then will come dullness again unless there shall grow out of it some definite and persistent plan of action. It will yield nothing to revive the Grange unless revival shall be followed by the inauguration of a new policy under strong leadership. My hope in this new departure is that it will stir up not merely the rank and file, but that it will develop new capacity and new blood in the leadership of Grange affairs. Next October the Grange will elect new officers. In my judgment its very life depends upon what idea shall prevail in the selection of Master, Secretary and member of the Executive Committee. My hope is that the inspection work now in progress will develop the men. The Grange has its eye hopefully on Greeley, Greer, Shoemaker, Goodenough, Sanders and others, and he who proves himself fitted for leadership is not likely to be forgotten on the day of election. All that is needed is a plan of action with energy in its enforcement—in other words, LEADERSHIP.

ALFRED HOLMAN.

## Mr. Ohleyer Discourses of the Weather, the Grange and the Cost of Wheat.

TO THE EDITOR:—If my memory serves me right, I heard an editor remark on a certain occasion that life was not made up of "sunset visions," meaning, as I understood, the phrase that mere sunbeams showered on an editor by his correspondents is rather slim diet for the average reader; and so it is, but what are we poor mortals going to do if we may not expatiate on the weather, and when, as now, there is more sunshine to the square inch than at any time since the advent of the year 1895. These bright, warm, sunlit days are glorious and appreciated by all creation; and of course so, all these evenings when the great orb has just slipped down behind the "Coast Range," throwing back against the firmament a golden hue after the manner of a brush fire behind a stone fence, or something of that sort.

The morning rays sent up from the east over the lofty Sierras are said to be equally gorgeous; so, then, what are you going to do about it. We would be glad to abolish them at your command, but just now we farmers and grangers need them in our business. Untoward conditions of which we read, and of which California is not wholly exempt, render the present sunny days doubly acceptable as an exhilarating influence, and as no people I ever heard of more readily forget adversities than Californians, we must allow them to bask in the present sunshine. All nature is in consequence smiling with a broad grin, if the term is permissible.

Grain is from six to sixteen inches in height, and as vigorous as can be, and yet as the superabundant moisture leaves the soil the plow takes possession, and is succeeded by seed and harrow. Such is the situation in Sutter county, and, I judge, to the north; but under the most favorable conditions the acreage of grain to be harvested will be from twenty-five to thirty-three per cent short of last year. It is of course too early to predict the rate of yield on the later sown, the early sown being good, yet limited as to acreage.

Such deluges of rain, from which we have suffered perhaps once in a decade, have during the past five years become uncomfortably prevalent and called for measures of relief and protection. At first glance the country seems a dead level, but on closer inspection a grade is revealed that will dispose of the excessive rainfall to an outlet to reduce the injury to a minimum and injure no one. This remedy lies in the fact that

**COULD HARDLY WALK**  
ON ACCOUNT OF  
**RHEUMATISM**  
P. H. FORD  
—OF—  
Quachita City, La.,  
After  
**TWO YEARS**  
**Suffering**  
**IS CURED**  
—BY—  
THE USE OF  
**Ayer's Sarsaparilla**

"For fully two years, I suffered from rheumatism, and was frequently in such a condition that I could hardly walk. I spent some time in Hot Springs, Ark., and the treatment helped me for the time being; but soon the complaint returned and I was as badly afflicted as ever. Ayer's Sarsaparilla being recommended, I resolved to try it, and, after using six bottles, I was completely cured."—P. H. FORD, Quachita City, La.

**Ayer's Sarsaparilla**  
Admitted  
**AT THE WORLD'S FAIR**



it is only necessary to reduce the grade to a uniform slope, when the water will depart as it falls in excess of the soil's capacity to absorb.

The community having become tired of this evil, a committee was selected whose duty it was to formulate an act, to be passed by the late Legislature, under which the work could proceed in a legal manner. The act will undoubtedly be approved by the Governor, as it is general in its application and of universal necessity on valley lands. It applies to lands other than swamp lands. The committee discharged its duty well and is entitled to the thanks of every one in need of the law. The names of those on the committee are Ex-Supervisor Eli Davis, J. W. More and N. B. Kirtley, editor of the *Sutter County Independent*, all of Sutter county, and George Thrasher, of Butte county. A mass meeting is already called in Yuba City for the 25th inst., to start preliminary work under the new law. Thus you will observe our farmers are again in the lead when duty calls them to protect themselves and neighbors from injury, by co-operation.

Our grange continues its even tenor. Owing to bad weather and worse roads it required considerable enthusiasm for those residing ten to fifteen miles away to come to town. But that state has passed, and no idle chairs will grace the hall for some time. Brother Shoemaker, inspector for this district, and Brother B. F. Frisbie, State deputy, visited Magnolia and Grass Valley Granges last week. Not having returned at this writing I am unable to speak of their reception, but I know it was cordial and successful, because those friends never do things by halves. The writer was to have been one of the party, but rheumatic joints forbade the pleasure.

Brother Shoemaker's itinerant, so far as I know it, is to visit Magnolia March 21, Grass Valley 23, North Butte 30, Yuba City April 6, Grimes 13, Millville 20, South Sutter 27.

I am glad to see the wheat question so prominently to the front. The *RURAL PRESS* is entitled to great credit for encouraging the present discussion. It is not strange, at least to me, that the cost of a bushel of wheat should vary so much in different localities. It is all due, or very largely so, to soil, manner of cultivation and the use of harvesting machinery. The cheapest wheat is grown on clean, level land, where rains, fogs or dews are unknown and where the mammoth steam harvester has full sway. In a recent Australian paper an expert gave the cost there of a bushel of wheat at thirty-six cents, which is at least not less than in California. It would be interesting to know the cost and the kind of harvest weather prevailing in other wheat-producing countries.

To my mind it is a battle for existence, and the final victory must be won by our superior climate, soil and labor-saving machinery. Yours truly,  
GEORGE OHLEYER.

Yuba City, March 24, 1895.

#### Of Interest to Patrons.

Just before the *RURAL* for this week goes to press there comes a letter from a well-known Patron reviewing critically the article by the editor in our issue of the 23rd. It goes into matters vital to the interests of the Order. We regret exceedingly that limitations of time prevent its publication in this number. It will, however, appear next week; and Patrons may look for some thing well worth their reading.

#### A Hard Blow and Quick Recovery.

On the night of March 7th the factory of the Field Force Pump Co., of Lockport, N. Y., was entirely destroyed by fire. With their usual ready enterprise the proprietors at once secured possession of another shop with power and, having saved a great many of their patterns, will be prepared within a few days to turn out as excellent pumps as ever. The company assures those who have placed orders with them that the unavoidable delay in getting work out will be short.

#### WANTED!

Position as Manager on a Large Farm. Thorough acquaintance with Stock Raising, Dairy Business, General Farming. Experience in foreign countries; French, English, German correspondence; Bookkeeping; Graduate of Agricultural Academy in Germany. P. O. box 1855, Bakersfield, Kern County, Cal.

**WHAT WE SAY WE DO WE DO DO**

Is experience worth anything in farming? Suppose you decide to move to town and rent the farm "on shares."

You have a chance to rent to a man who has been a store-keeper; to another who has been a stock buyer; to one who has been farming for five years, and to another who has been farming for twenty years. Other things being equal the "twenty year" man would get your farm. Greater experience—that's the reason.

**McGORMICK**

is the name of the inventor of the first successful reaping machine.

Since 1831 that name has been identified with whatever is best in grain and grass harvesters.

The makers of the McCormick have neither been "keeping store" nor "buying cattle"—perfectly honorable lines of business but not the McCormick line. For sixty-four years they've simply been building McCormick light-running steel binders, reapers and mowers. That's greater experience than anybody else has in this line.

That's one of the reasons why McCormick machines lead the world.

There are others; apply to the nearest McCormick agency for particulars.

**WHAT WE SAY WE DO WE DO DO**

## GRANGERS' BANK

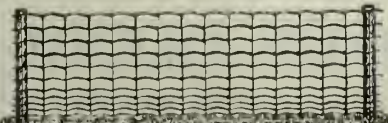
OF CALIFORNIA.  
SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 1874



Capital Paid Up.....\$1,000,000  
Reserve Fund and Undivided Profits, 130,000  
Dividends Paid to Stockholders.... 832,000

—OFFICERS—  
A. D. LOGAN.....President.  
I. C. STEELE.....Vice-President.  
ALBERT MONTELLIER.....Cashier and Manager.  
FRANK MCMULLEN.....Secretary.  
General Banking. Deposits Received, Gold and Silver. Bills of Exchange Bought and Sold. Loans on Wheat and Country Produce a Specialty.  
January 1, 1894. A. MONTELLIER, Manager.



#### NOT A WORLD'S FAIR MEDAL.

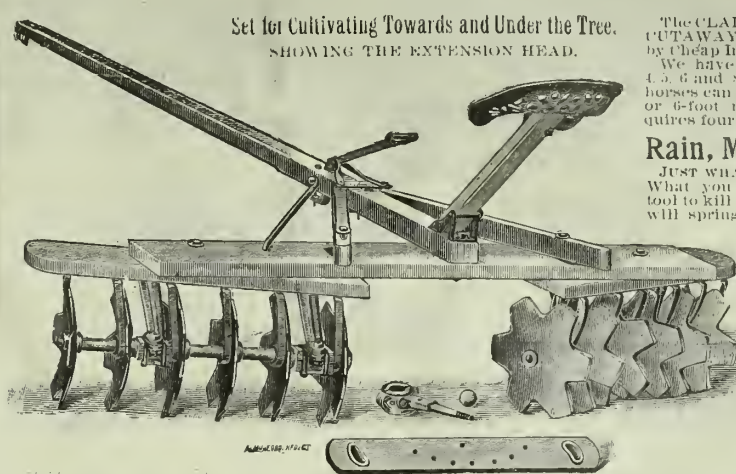
DETROIT, Mich., Feb. 19th, 1895.  
To Whom It May Concern:—Mr. W. D. Withington of this city, has recently constructed about four (4) miles of the "Page Woven Wire Fence" around the park recently given to the City of Detroit, located on the Log Cabin Stock Farm. I consider the fence one of the best, in every respect, on earth.

Very truly,  
I concur in the above.  
Fence is perfectly satisfactory.

C. K. LATHAM,  
Com. of Parks and Boulevards, of Detroit.  
Senator Palmer was President of the World's Fair Com. and Mr. Simcock is his Manager.  
PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

BACK FILES of the *PACIFIC RURAL PRESS* (unbound) can be had for \$2.50 per volume of six months. Per year (two volumes), \$4. Inserted in Dewey's patent binder, 50 cents additional per volume.

## The Reversible or Fruit-Growers' and Orchard Harrow.

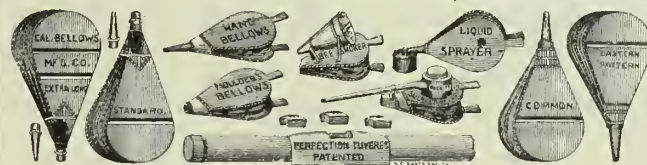


IT WILL DO IT, TOO, and do it better than any other tool you have or can get. We furnish (without extra charge) with the 4, 5 and 6-foot machines, if desired, an extension head, as shown in cut above. By using this head the soil can be cultivated clear to the trunk of the tree without the overhanging branches interfering in the least with the work of the horses.

**ALLISON, NEFF & CO.,**

421 & 423 MARKET STREET.....SAN FRANCISCO, CAL.

## CAL. BELLOWS MANUFACTURING CO., Manufacturers of Bellows of Every Description



Special attention called to our Sulphur or Vineyard Bellows, known as the FAVORITE, also our Liquid-spraying Bellows, which is admirable, complete for spraying plants, shrubs, etc. Send for Catalogue, 123 and 125 Beale St., San Francisco.

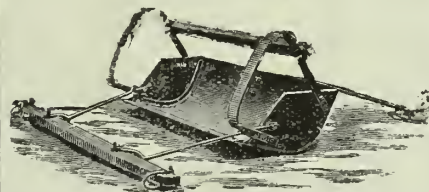
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37 Market Street, San Francisco, Cal.

BLMYER BELLS—Church, School and Fire; ZIMMERMAN FRUIT EVAPORATORS; LEADER WINDMILLS, NON-SHRINKING TANKS; PUMPS; PIPE AND FITTINGS; FOLDING SAWING MACHINES; VANDUZEN'S STEAM JET PUMPS; WINE PRESSES; CIDER PRESSES; LARD PRESSES; BUTCHERS' MACHINERY AND TOOLS; STEAM ENGINES; HORSE POWERS; SORGHUM AND SUGAR MACHINERY; RICE AND COFFEE MACHINERY.  
Write for Catalogues and Prices of such goods as you may want.

## THE Porteous Improved Scraper.

Patented April 3, 1883. Patented April 17, 1883.



Manufactured by G. LISSENDEN.

The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Leveling Land, Road Making, etc.  
This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

This Scraper is all Steel—the only one manufactured in the State.  
Price, all Steel, four-horse, \$40; Steel, two-horse, \$31. Address all orders to  
G. LISSENDEN, STOCKTON, CAL.

## MOORE, FERGUSON & CO.

WOOL, GRAIN, FLOUR

—AND—  
\* General Commission Merchants, \*  
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Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

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Open All Year. : A. VAN DER NAILLEN, Pres't.  
Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. Established 1864. Send for Circular

IF YOU WANT A SMALL FARM ON MOST favorable terms, address  
S. C. TRAYNER,  
Marysville, California.

KEEPERS SEND FOR sample copy of CLEANINGS IN BEE CULTURE. A Handsomely Illustrated Magazine, and Catalog of FREE. THE A. I. ROOT CO., Medina, O.

**WHAT'S THE MATTER?**  
FARM COVERED WITH STUMPS.

**THE OLD WAY**

**THE NEW WAY**

**HAWKEYE GRUB & STUMP MACHINE**

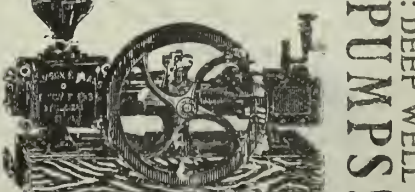
Works on either Standing Timber or Stumps. Pulls an ordinary Grub in one and a half minutes. Makes a clean sweep of two acres at a sitting. A man, a boy and a horse can operate it. No heavy chains or rods to handle. The crop on a few acres the first year will pay for the machine. You can not longer afford to pay taxes on unproductive timber land. Clear it, raise a beautiful crop with less labor and recuperate your old worn out land by pasturing. It will only cost you a postal card to send for an illustrated Catalogue, giving price, terms and testimonials. Also full information concerning our 1. X. L. Grubber, Iron Giant Grub and Stump Machine, Two Horse Hawkeye and other appliances for clearing timber and land. Address  
MILNE MANUFACTURING CO., 641 8th St., Monmouth, Ill.

Sunny-side Shetland Pony Farm. For catalogue address Milne Bros. at above office and number. Breeders of Pure Shetland Ponies.

## ★ C. H. EVANS & CO., ★

(Successors to THOMSON & EVANS.)  
110 & 112 BEALE STREET, S. F.

MACHINE WORKS,  
Steam Pumps. + Steam Engines.  
All Kinds of MACHINERY

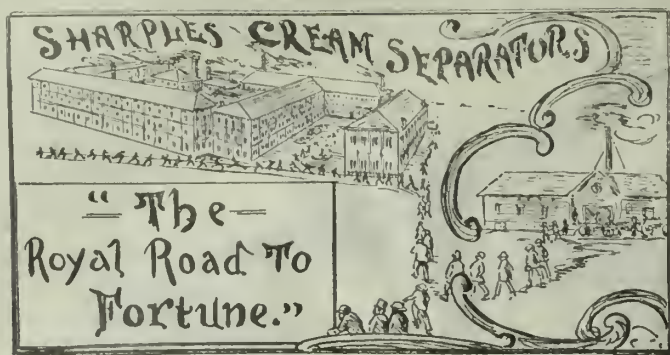


**SAMPLE American Bee Journal.**  
(Established 1861).  
**FREE** Weekly, \$1 a year. 7 Editors. 160-page Bee-Book Free!  
All about Bees and Honey  
G. W. YORK & CO.  
56 Fifth Ave.  
CHICAGO, ILLINOIS.

## STUMP PULLERS

HOOKER & CO.  
16 & 18' DRUMM ST S.F.





## IMPROVE AND PROSPER.

Why should a dairyman or a creameryman work and slave all his life for a bare living when he can do better? The extra profit made in a creamery by the use of a

## SHARPLES RUSSIAN SEPARATOR

Will amount to a competence, and a liberal one, for the proprietor's old age. Let farmers examine the question for themselves. Let them go to any factory running a separator where

### THE BOWL ALONE REVOLVES

And see for themselves. Now us to a comparison between different separators. See what a Litchfield paper says of a recent contest:

LITCHFIELD, MINN., Feb 27, 1895.

GENTLEMEN:—At Litchfield creamery to-day, in presence of Gen'l Manager, Directors, and several stockholders, two tests were made between the Russian and Alpha separators by the butter maker, Mr. Sondergard. The first test was slightly in favor of the Russian, it showing but a mere trace of butter fat. The skim milk taken in second test showed about the same from both machines; there being no perceptible difference. The gentlemen present acknowledged that the Russian machine was skimming better than the Alpha. Attention was also called to the fact that while the Russian was running very smoothly and required no attention, the Alpha was shaking badly, requiring frequent inspection, and the two streams of oil running down the floor could not be overlooked. There are not millions of waste, when the bowl alone revolves.

BY ONE WHO WAS THERE.

Send for circulars and please mention this paper.

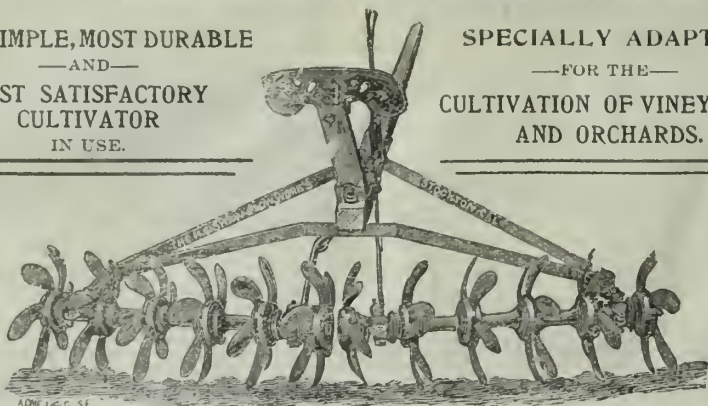
## Baker & Hamilton,

Sole Pacific Coast Agents,

SAN FRANCISCO. SACRAMENTO. LOS ANGELES. NEW YORK.

MOST SIMPLE, MOST DURABLE  
—AND—  
MOST SATISFACTORY  
CULTIVATOR  
IN USE.

SPECIALLY ADAPTED  
—FOR THE—  
CULTIVATION OF VINEYARDS  
AND ORCHARDS.



## THE MORGAN SPADING HARROW.

The greatest pulverizer of the age. The name Spading refers to its action on the soil. The action of each cutter or blade is like that of a small spade, lifting and turning the soil to a depth of four to six inches. The frame is arched so as to clear the most uneven ground. A, blades 16 inches long; style C, 18 inches long. Can be reversed.



### Avery's Steel Frame Napoleon Gang Plow.

Has EXTRA STRONG and HIGH BEAMS, being twenty-three inches in the clear; prevents clogging with trash.  
HIGH WHEELS, twenty-six inches in diameter.  
AXLES, one and five-eighths inch cold-rolled steel.  
THE HITCH is center draft, reaching from rear axle.  
THE LIFT is extra high and easy. Furnished with or without seat attachment and rear wheel.

SEND FOR CIRCULARS.

## H. C. SHAW PLOW WORKS,

STATE AGENTS, STOCKTON, CAL.



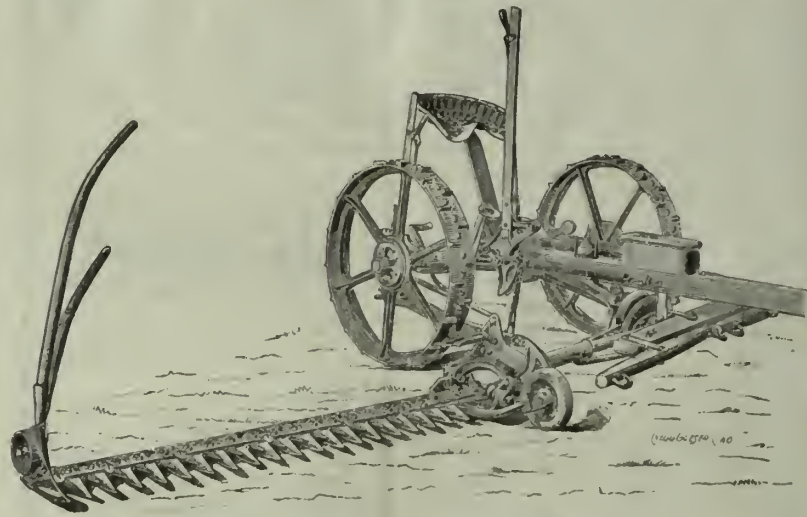
### The Morgan Grape Hoe

Is one of the greatest labor-saving tools ever invented for use in the culture of grapes and berries, and is especially adapted to vineyard work. After cultivating between the rows the MORGAN GRAPE HOE will take out all grass and weeds that remain under the vines and around vines and posts, and will thoroughly stir the soil close to the vine. The saving of time and labor will soon pay the cost of this tool, for this work is usually done by hand-hoeing—a slow and expensive way.

# WE BUILD MOWERS!

If You Want an UP TO DATE  
Machine, the OSBORNE  
Will Fill the Bill.

If You Had Rather Buy a Mower  
That Is of ANTIQUE STYLE, the  
Osborne WON'T Please You.



OSBORNE NO. 4 MOWER—4½ ft., 5 ft. and 6 ft.

LIGHTEST DRAFT  
NO LOST MOTION.

WIDE TRUCKS AND BROAD-FACED  
WHEELS.

FLEXIBLE CUTTER BAR



GREATEST RANGE OF TILT.

PITMAN AND CUTTER-HEAD PERFECTLY PROTECTED.

CUTS ANY HAY THAT GROWS.

LET US SEND YOU ONE OF OUR NICE CATALOGUES.  
Address:

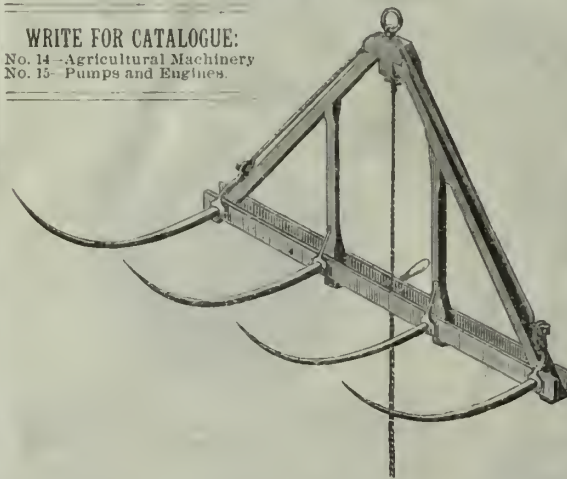
D. M. OSBORNE & CO., 27 MAIN STREET, SAN FRANCISCO.

## Jackson's "Light Weight" Horse Forks,

Made and sold under the following Letters Patent:

No. 210,458 Dec. 3, 1878  
No. 396,867 Oct. 14, 1884  
No. 403,019 May 7, 1889  
Other patents pending

WRITE FOR CATALOGUE:  
No. 14—Agricultural Machinery  
No. 15—Pumps and Engines.



The purpose of this notice is to inform both farmers and merchants, who use or sell Horse Forks, that they must not purchase Horse Forks that infringe the above Patents; and to call their attention to the fact that certain horse forks, manufactured by F. E. Myers & Bro., Ashland, O., and imported and sold by the Deere Implement Company, of San Francisco, are direct infringements of the above patents, the manufacturers of the infringing forks having admitted in Court that their forks were an infringement of the above patents, and are now paying royalty for manufacturing and selling; and they have agreed not to sell any west of the Rocky Mountains.

All parties selling or using these infringing Horse Forks will be promptly prosecuted.

PRICE REDUCED (3-foot, with 4 tines, each \$20 00  
3½, 4 and 4½-foot, 4 tines, each 25 00  
5 and 6-foot 30 00

Extra Fork Tines, \$2.50 each.

## BYRON JACKSON MACHINE WORKS,

625 Sixth Street, San Francisco, Cal.

### "INDURINE" COLD WATER PAINTS.

A Most Remarkable Material is the OUTSIDE INDURINE. It stands rain and exposure as well as oil paint and costs only a fraction as much. It is just the thing for fences, outbuildings, factories, etc., being cheap, durable and easily applied by anyone.

It has no equal as a light reflector for light-shafts and court-yards of large buildings. It is supplied in a thick paste, to be diluted with cold water. It is made in white and several colors.

INSIDE INDURINE Is designed especially for factories, stables, and general inside work, as a substitute for whitewash, kalsomine or oil paint.

It will not rub or scale, soften or darken with age, and works well over old whitewash. A dry powder to be mixed with cold water.

Both Indurines are perfectly fire-proof. Send for circular and prices to

WM. BURD, MANUFACTURER, Mills Building, San Francisco, Cal.

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## PAPER,

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BLAKE, MOFFITT & TOWNE, Los Angeles  
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### Exterminating Squirrels.

No poisonous compounds used; sure death, and failure is unknown; material used costs nothing. Information free.

—Address—

F. E. BROWNE, 314 So. Spring Street, Los Angeles, Cal.



# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 14.

SAN FRANCISCO, SATURDAY, APRIL 6, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

### Olives at Santa Barbara.

It is appropriate to the month of the great floral festival at Santa Barbara to present a picture illustrative of one of the most significant scenes in that beautiful and interesting region. Without disparagement to any other locality, it may be fairly claimed that Santa Barbara has no superior in the line of varied charms. None has better preserved relics of the Mission era, and consequently none can better satisfy the longing for looking backward, which is strong in many minds. None has superior picturesqueness of environment for mountain, hill, sea and island are all caught at a glance from almost any point. None has superior climate for plant or human life, and in none have wealth, culture and leisure collected in narrower compass. It is not surprising then that Santa Barbara has enjoyed a peculiar and characteristic fame ever since the Americans came to California. This unique repute it bids fair always to retain, even though it will soon be placed on an overland railway line and may find its activities in certain directions somewhat

stimulated thereby. The town of Santa Barbara may become more of a business center, the access of tourists and homeseekers may be freer and lovely cottages and villas may multiply on all sides, and yet the charming outlook from its hillsides upon the unchanging ocean, the unbroken mildness of its shady vales, the picturesqueness of jutting rocks and frowning heights beyond its immediate site will all join to preserve the identity of Santa Barbara no matter what development the course of a national highway through its area may occasion.

Whatever may have been the motive of the old padres over a century ago, they succeeded in locating their Santa Barbara Mission most eligibly and picturesquely, and it will always remain a commanding feature. The engraving which we use this week is not intended to show that fact, but rather to bring to the sight of olive growers everywhere olive trees which have outlived a century of productiveness and are still fruitful in spite of periods of neglect and unwise cutting. Of course an olive tree a century old is but a baby plant when we count the age of trees in Europe or Palestine perhaps, and yet a century is quite a period in America. The significance of these old trees as demonstrating the fitness of California for olives is always conceded, and interest in these old progenitors of the present race of

olive orchards will always live. The direction between the old and the new in the olive industry is more sharply seen in the olive than in any other of the many Mission fruits. The two olive enterprises which until quite recently were the greatest in the State sprang directly from the Missions.

### Wider Refrigerator Service.

It is fair to presume that competition in refrigerator car service will redound to producers' benefit, as competition in other branches of transportation does. At all events, those having perishable products to ship will be glad to see the experiment tried. Nothing can be worse than the present exorbitant charges. The plan of Armour & Co. to

### Wanted—A Substitute for the Plow.

Secretary Morton, of the Department of Agriculture, declares that the invention most needed in the United States at this time is a substitute for the plow. The plow, he says, is an enemy to fertility; and when used in heavy soils packs every furrow it passes over and renders the same impervious to rain. The Secretary explains this as follows: "The draft of the plow is downward to such an extent that the full force of the team's strength is exhausted in pressing the bottom of the furrow into a polished trough for the conduction of rain down the side hills. It is necessary to stir up the soil and subsoil for eighteen inches. If, for instance, it were possible to loosen the soil and subsoil down for three feet all over the

State of Nebraska, we could then, with an annual rainfall of 20 inches, make abundant and profitable crops. Until deep plowing—thorough subsoil tillage—becomes universal in that commonwealth, there will be, year in and year out, no certainty of remunerative crops.

"Professor Shaler, of Harvard, estimates that the present in-

efficient and ill-resulting methods of plowing, especially upon undulating lands, cost the agriculturists of the United States 250 square miles of soil each year by erosion. Everywhere in Nebraska, where torrential rainfalls are so frequent, the side hills verify Professor Shaler's theory as to the annual waste of washed lands."

THE California crop outlook, as given in detail by Director Barwick's report upon another page, can hardly fail to attract attention. It is worth careful reading. It shows clearly how much nature is doing to give California a good old-fashioned year of bountiful production, and if trade would only do as well the summer of 1895 would remove the last traces of depression from the public mind. There is no reason why this should not be realized to a degree at least and it is well to hopefully look forward to it. It is not a time to branch out much in speculative lines, but it is a good time for courage and reasonable expectations.

THE Cunningham irrigation law, recently passed in Idaho, provides that the legal standard of measurement for water in that State shall be "a cubic foot of water per second." Thus in Idaho the miner's-inch measurement no longer prevails.



THE OLD OLIVE ORCHARD AT THE SANTA BARBARA MISSION.

put on a new line of their own refrigerator cars has already been mentioned in the RURAL, and a more definite statement of their purposes is interesting. The manager of the enterprise is now in this State, and he has published a schedule of charges which the new company proposes. It appears to give a material reduction on the old rates, varying from \$35 per car, Sacramento to Chicago, to \$60 per car, Sacramento to Boston. This, it is claimed, does not include all the reduction, for the rates quoted are irrespective of weight, as they propose not to charge anything extra on excess over 24,000 pounds. One other feature of the new tariff will be the still further reduction on cars that are forwarded with the ventilators open to the main icing station at Truckee. Much of the fruit shipped can be forwarded without detriment in this way. In fact, it is claimed that in some instances where cars are loaded in the afternoon and can be forwarded the same night the fruit is benefited by the cool air blowing through the car during the night. The company states that the aggregate amount of reduction for the year's shipments would be over \$300,000—a clear saving to the fruit-growers. These are fair promises. The realization of the benefits indicated cannot come too soon. Cheap refrigeration will benefit many other lines of production as well as fruit.



# PACIFIC RURAL PRESS.

Office, No. 220 Market St.; Elevator, No. 12 Front St., San Francisco, Cal.

All subscribers paying \$3 in advance will receive 15 months (one year and 15 weeks) credit. For \$2 in advance, 10 months. For \$1 in advance, five months.

Advertising rates made known on application.

Any subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

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ALFRED HOLMAN.....Editor.  
E. J. WICKSON.....Special Contributor.

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## The Week.

### By-Products.

The economies of manufacturing may help out production in agricultural as in other lines. The statement is interesting that the Healdsburg cream of tartar factory has used this season 5000 tons of pomace, purchased in Napa and Sonoma counties, out of which 11,000 pounds of cream of tartar and 12,000 gallons of brandy had been made. Both brandy and cream of tartar were marketed in New York.

### Forestry

### Stations.

The Governor has signed the bills providing for the continuation of the University forestry stations at Chico and Santa Monica. The funds are cut to a very narrow pattern, as is fashionable this year, but there will be enough to carry on the work on a modest scale. There have been very notable improvements made since these stations were transferred to the University in 1893, and though there can be little extension under present conditions, there will be doubtless many important suggestions for tree planters to be had by inspection of the plantations and by the reports which will be made.

### Budd and the

### Poppies.

The last Legislature passed a law making the *Eschscholtzia*, or California golden poppy, the State flower. This enactment merely legalized the action taken long ago by the State Floral Society and other similar bodies. Many will be surprised to hear that the Governor failed to sign the bill, but will be glad to know that his act carried no malice nor intentional slight of this glorious bloom. The Governor tells the *Record-Union* that he had not intended to slight the poppy, but on the last night for signing bills it got lost in the shuffle and was locked up in the safe, where several hundred other pet measures were "pocketed." Just as he was leaving his office, after the wearisome duties of that eventful night, the Governor was asked by some one if he had approved the poppy bill. Then it occurred to him that he had not, but he said he wouldn't go back and open that safe again even though he made an enemy of every poppy in the State. The patient poppy will shine just as brightly but Governor Budd should provide for its honors early in the next Legislature.

### Cooling by

### Evaporation.

We are to have another shipping process tested this year. It is announced that Dr. J. M. Gilstrap, an Oakland dentist, will exhibit a model of a fruit car on which he has just obtained patents. "My plan," said Dr. Gilstrap recently to a reporter for the *Santa Maria Times*, "is to take any ordinary box-car and put a frame inside of it, leaving space enough around the frame to permit a man to look

out for the fruit. With doors at the end of each car one man can take care of an entire trainload. The frame is covered about the sides and ends with heavy burlap, doors being made at each side of the fruit receptacle. The bottom of the frame is raised two inches from the car floor for the purposes of ventilation, and there are various holes in each side of the car to let the air in and out. On the top of this frame, extending the entire length and width of it, is a galvanized iron tank. This serves as a roof for the fruit compartment, and it has several flues passing up through the water tank and roof of the car for thorough ventilation. The tank will hold 1500 gallons of water. By a system of openings about the tank, which the man in charge can regulate, the water will constantly drip down on the burlap and keep it wet, while the fruit remains dry. The ventilation by the means already shown is thorough and the motion of the car will give a continued draught. Evaporation will under the circumstances be rapid, and, however hot the weather may be, the temperature in the fruit department can be kept down to seventy-five degrees. The cool, moist air will keep the fruit in the finest condition.

### Irrigation

### Colonies.

There is an agitation now in progress at the extreme East which bids fair to lead people there to take more interest in Western affairs and possibly to disseminate more generous views of the desirability of Western development. Mr. W. E. Smythe, of Chicago, Chairman of the National Irrigation Congress, has interested Edward Everett Hale, of Boston, in this colonization movement, and the distinguished divine heartily approves it. From a meeting held recently in Boston it is telegraphed that Mr. Hale said:

On March 18, 1845, I wrote a circular for a call for a meeting interested in the emigration movement to Kansas, then practically unsettled, and the other day I wrote the call for this meeting, just fifty years later. Two per cent of the population of the United States moves westward every year; 250,000 persons will move from Massachusetts this year. The complaints and hardships about Western places result from people going out alone. They get homesick and want to return. By the colonization system a large number are enabled to go together, and become acquainted on the way out, and mutual friendship springs up and continues and emigrants become more contented in places where they locate. We are here to take measures in Boston, which will be followed by other cities, so that a colony may start during the summer for the purpose of obtaining homes for themselves and families.

California is rather conservative on the question of assisted colonists who have to begin on nothing and board themselves, but we can see that the agitation of the whole Western question which Mr. Smythe's measure will bring about will be of great importance to the whole country. We wish his enterprise the fullest success. If he gets the right kind of people it may go, but much will depend upon whether the colonists have capital enough to carry themselves until some returns are available.

### Tanning

### Extracts.

It is now announced that making of tanning extract from bark is about to begin with adequate capital in the upper part of Sonoma county. If the venture proves successful, it will result in the reduction of our bark supply very rapidly, for the extract is condensed enough to stand shipment long distances. If the canaigre ventures are pushed successfully, it will be a great thing for the State, for it will save many of our trees from destruction. Cutting trees for bark is like killing stock for the hides; it is a shamefully wasteful process. It is even worse than that because it takes centuries to grow a majestic tree such as will be freely destroyed. Let us dig our tanning extracts out of the ground and save the trees.

### Lighthouse

### Whitewash.

A reader asks us to publish the recipe for the whitewash used on the lighthouses of the United States. The lighthouse inspector in this city furnishes us the following formula for mixing whitewash, which, when properly mixed and put on, does not easily wash or rub off: "To ten parts of freshly slaked lime add one part of best hydraulic cement, mix well with salt water and apply quite thin." We suppose in lighthouse work they use sea water, which contains about 3½ pounds of salt to 96½ pounds of water. The presence of the salt is important, and in the interior it can be secured by using common salt in the proportion noted.

LOS ANGELES Times, March 27th: The orange market has continued rather quiet during the week, especially for seedling varieties, the imports from Europe to the Atlantic coast still having been quite heavy. In addition to this, it is announced that large quantities of Mexican oranges have been imported, not only from the State of Sonora, whence a good many oranges have been exported to the United States for a number of years, but also from the more southern sections of Mexico. These oranges are thin skinned and sweet, and are said to sell very well. The demand for lemons is good throughout the East at fair prices. Dealers who are beginning to get acquainted with the California fruit say that it is of first-class quality and is bound to become popular. If the California growers exercise a little care in not gathering the fruit while it is too green, they ought to be able before long to drive the foreign fruit out of the market.

## From an Independent Standpoint.

One of the stock objections to Government ownership of the Nicaraguan canal has been that it is not allowable under a treaty contracted long ago between our Government and that of Great Britain, by which both countries stand pledged for all time to keep hands off from the eastern coast of Nicaragua. The answer to this has been that conditions have changed since this treaty was made; that the diplomacy of two generations ago had no authority to put limits upon the national will of to-day; and that the progress of the world cannot be expected to halt because cobwebs in the shape of outworn treaties cross its path. All that we need to do, it has been urged, is to notify the British Government that we shall no longer regard the obstructing treaty; and then, with the consent of Nicaragua, go ahead with the work. The answer of the anti-canals men to this has been much horrified talk about the "sacredness of treaties," with moans about the decline of "national honor," and other such "fustian"—this, too, from such exemplars of pure virtue as C. P. Huntington, Henry Villard, and their satellites. It has all been for a purpose, of course—the purely selfish purpose of defeating the canal project, at least as a national enterprise. There is not a man of them who does not know that treaties are "sacred" only so long as nations consent to be governed by them; and that no violation of "national honor" can be involved in the frank abrogation of a treaty when it stands in the way of national opportunity and national duty.

While President Cleveland and others in authority have been acting about this old treaty as if it were something rather more sacred than the Word of God, England, with an eye to the main chance as usual, has proceeded in utter contempt of it. It is her aim to have a hand in the canal herself; and as a means of "getting in" she has trumped up a cheap and flimsy pretext for a quarrel with Nicaragua. Some weeks ago, in pursuance of a "claim" of a sort so indefinite that it has never been satisfactorily explained, English forces were landed at the Nicaraguan port of Blue Fields and they show no sign of leaving—all this just as if there were no such thing in existence as a "sacred treaty." Of course, the motive is plain to all the world. Blue Fields commands, in a military sense, the entrance to the projected canal, and England proposes to be in a position to share in the control of that great commercial highway. With rather more spirit than might have been expected, our Government has formally protested against England's course in this matter; and, it is said, has notified the British Government that she must call her troops off from American soil. This is not officially confirmed; but the story gains credit from the fact that six of the biggest American war ships have been ordered to rendezvous in Central American waters. Such a display of force will be understood by England as meaning business and it is believed that it will cause the red jackets to be ordered to their ships. It is clearly the duty of our Government under the "Monroe doctrine" to compel them to leave.

There are bound to be several effects of this business, all favorable to the immediate construction of the canal by the American Government. First, it shows how little England regards the treaty of which our statesmen have made so much. Second, it exposes England's wish to get control of the projected canal. Third, it cannot fail to arouse American interest in the project, not only as a commercial work, but as a high national opportunity. Fourth, it brings into contempt the timid and vacillating policy which has thus far characterized our course in the whole canal business. In view of all this, there seems every reason to hope that the next Congress will take steps to build the canal promptly and secure its control as an American national enterprise.

As nobody ever seems able to foretell just when, why or how seasons of depression come upon the world, so nobody is ever able to foretell when, why or how prosperity is to revive. There seems really no reason why next year should be better than last year; nevertheless there are many signs that it is to be. Wheat, though still very low, is a little steadier in price of late; cotton, it is noted, has advanced a little; silver is making a little gain; clearing-house statements all the country over show a bigger volume of exchanges. In California there is manifestly "a better feeling." Real estate sales are more frequent; railroad enterprise is stirring; the value of beef cattle is advancing; people are beginning to really hope for the Nicaraguan canal; there is a general hopefulness of better times ahead. All this is well, for if we really expect good times, it will go far towards bringing them.

San Francisco and San Joaquin Valley railroad affairs have made a substantial advance since our last reference to them. Engineers and surveyors are in the field and a supply of steel rails has been ordered to be delivered here in July. Work is to begin at Stockton and advance southward, but no other information as to route has been given out. It is, however, the general expectation that another line will be built from this city south through the Santa Clara valley, intersecting the line from Stockton at a point east of the Pacheco Pass. As to the connection between Stockton and San Francisco, there are many suggestions, but it has yet to be determined. The total of stock subscriptions is now close up to three millions, and is steadily climbing. Stockton takes \$100,000 and gives depot grounds and rights of way; San Jose offers \$200,000 and similar concessions in the way of depot grounds; and all down the valleys come offers proportionately liberal. It is believed that these concessions will aggregate in value a round million of dollars. All the movements of Mr. Spreckels and his associates indicate that they are planning for something more than a local road. It is clearly in their minds to so equip the new line in the way of depot room in this city and at the various sub-terminal that it will attract an eastern connection. It is declared that work will be pushed this summer and next winter and that the road will be in operation in time for the crop season of 1896.



### "Does Farming Pay in California?"

TO THE EDITOR:—Your article in last week's RURAL PRESS—"Does Farming Pay in California?"—interested me because it brought out very clearly the kind of farming which *does pay* in contrast with the kind which does not. There is no poorer man in California to-day than the great land holder, used to living in an expensive way. To such a farmer there is no advantage in growing wheat at fifty cents a bushel if it costs fifty cents a bushel to raise it. The reason is that the whole cost is *paid out to others*. Now there is another sort of farmer who fares very well under the same general conditions because the main elements of cost are *paid to themselves*. To illustrate: The big farmer pays to hired men for the plowing, harrowing, seeding, harvesting and hauling, essential to the growing and marketing of a crop; and the whole value of his season's product is practically paid out before he gets his returns from his broker. The other sort of farmer, perhaps with the help of his own family, does his own plowing, harrowing, seeding and hauling, and thus finds himself in profitable work all through the season. While he may make no profit in his capacity as owner, he still is ahead of the hounds at the end of the year in his capacity of plowman, harvester, hauler, etc. It is a case where *commercial farming* is a losing game under conditions which render *domestic farming* still moderately remunerative.

Now, I am on both sides of this proposition. I have never ceased to be a working farmer, but nevertheless find it impossible to do all the work on four hundred acres. On a tract of ninety acres which I work myself, I make good wages, and during the two past seasons have made a good living for my family of seven persons (with their help); but from a tract of some 270 acres, which I hire worked, I have not made enough to pay the taxes. I would really be better off with the smaller tract.

Now, these facts illustrate the conditions which prevail all over California to-day. The big farmer, especially if he has an interest bill to meet each quarter—and most of them have—is in a bad fix; he is making nothing, and he must, unless there comes a change, go to the wall. On the other hand, the small farmer free from debt, who works his land with his own hands, is in pretty good shape—in better shape, really, than any other class of business men in the State.

The above set of facts may seem hard upon a certain class, but it will do good in the long run, because in the wind-up the most profitable kind of farming must become the practice of the country. Holding as I do that diversified farming on small tracts is the best sort, I am not going to complain at conditions whose inevitable effect will be to break up the big ranches and multiply the number of small homes. It is hard on the frogs, but it is fun for the boys; and in the final adjustment, it will, I believe, make prosperity on a new and better basis in California.

And now, while I am about it, I have just one more thought to offer, and that is respecting the *benefits* of hard times. In past years we have all sailed our kites too high. We have indulged too much in luxuries—we have not, like the good lady whose place you wrote about last week, properly discriminated between our *wants* and our *needs*. The result is that we have been spoiling both ourselves and our children. The jolt of hard times wakes up fifty per cent of even our farming population to the fact that they are forgetting the sturdy virtues of our forefathers. A man like the big rancher you speak of in last week's article, who used to be happy and contented in his poorer days, but who as a rich man hates his place and is weary of life, has suffered from *disintegration of character*; and his grown-up children who are "bored if they have to spend a week on the farm" are sadly in need of a little industrial and moral discipline.

Perhaps this season of hard times, which we spend so much time in deploring, is going to give us blessings in many ways we think not of.

A SACRAMENTO COUNTY FARMER.

### Potato Growing.

TO THE EDITOR:—A neighbor tells me that he once much increased his crop of potatoes—which, being planted in very rich soil, had thrown forth luxuriant vines—by partially mowing off the tops. Can you or any of your readers inform me of any similar experience by way of corroboration? My soil is a rich, sandy loam.

Further, do you think that the application of an artificial fertilizer—a phosphate made by a San Francisco firm—would be apt to increase the vine, to the detriment of the tuber, and do you know about how much should be applied to each hill?

Soquel.

We have had no experience with mowing potato tops. Can some reader answer?

The use of phosphatic or a potash manure ought not to produce excessive top growth. An excess of nitrogenous manure might do that. But it would be a question whether any manure would be desirable on a rich sandy loam which our correspondent says he has. Such a soil ought to produce good potatoes without manure. The best procedure would be to apply the manure on a small part of the field and note the result as compared with the unmanured part.

### Enforcement of the New Dairy Law.

The newly appointed State Dairy Bureau has issued the following circular concerning the enforcement of the act to prevent deception in the manufacture and sale of butter and of cheese:

The State Dairy Bureau hereby notifies the public that on and after May 1st, A. D. 1895, it will proceed to the rigorous enforcement of the law enacted on the 9th of March, 1895, for the prevention of deception in the manufacture and sale of butter and of cheese.

The following are the principal features of the law:

The coloring yellow of oleomargarine or other imitation product is absolutely prohibited. And the possession of, sale of, or offering to a patron for consumption of such imitation product when colored yellow is a misdemeanor.

The use of the words "butterine," "dairy," "creamery," or of dairy symbols in connection with the sale or advertisement of the imitation product is absolutely prohibited.

In the handling of the imitation product, the manufacturers, shippers, carriers, wholesalers and retailers, peddlers, bakers, hotel, restaurant and boarding-house keepers must comply with certain regulations as to the labeling of the packages, the specification by printed statement of the contents and the proper notification of the purchaser, consumer or patron.

Other provisions of the law invalidate a contract made in violation of the act; prohibit the use of imitation products in charitable institutions; make the effacement of labels and marks a misdemeanor; provide what is evidence of intention to violate the act; authorize the State Dairy Bureau to make use of the search warrant; require the District Attorney to prosecute and the informer to receive half of the fines; and establish a State Dairy Bureau for the period of two years, and with a fund of \$12,000, for the enforcement of the act. Violation of any of the provisions of the act is a misdemeanor, and a first offense is punishable by a fine of not less than \$50 nor more than \$150, or by imprisonment for not more than thirty days; and subsequent offenses are punishable by a fine of not less than \$150 nor more than \$300, or by imprisonment from thirty days to six months, or by both.

The provisions of this law have been sustained in the highest courts of all the several States in which it has been enacted, as well as in the Supreme Court of the United States.

Copies of the law may be obtained by applying to the State Dairy Bureau at San Francisco.

L. TOMASINI (chairman),

THOMAS FLINT, SR.,

GEO. W. BURBANK,

Members State Dairy Bureau.

S. F. March 30, 1895.

### Interview with Col. Hersey.

San Jose Mercury, March 31st.

The stock of dried fruit on hand is being pushed out into the market at an encouraging rate without any signs of a weakening in prices, and there is every reason to believe that the coming fruit crop will be a good one—in fact, so far as can now be foreseen, much above the average.

Of course all danger from frosts is not over with yet, and I do not believe there are many agents making bargains for lots of the coming green fruit crop. Although the prospects are very favorable, if not for a tremendous crop, at least for limited quantities of larger sizes that will bring better prices, yet any purchases and sales that were made now of green fruit would be a matter of speculation, and are not based upon any definite knowledge as to what the condition of the market and crop will be after the coming fruit harvest.

It has been reported that a contract was recently closed in San Jose for sixty tons of green apricots for \$20 a ton. This may be considered a fair price if the fruit is taken just as it comes from the trees, but generally it would not be considered by fruit raisers to be high enough. Taken throughout the county, the prospects for a good crop of apricots is very encouraging at present. The most serious complaint has been from the vicinity of Gilroy, but even in that section there will by no means be a total loss. The young apricot trees in all sections show a good, full crop. There are few, if any, Moorpark, but the Blenheim, Hemskirk and Royal varieties of the fruit seldom fail to show a fairly good crop in all orchards.

At present the old prune trees in the orchards are in full blossom. Last Sunday was about the height of the blooming season for the average of the prune trees. The petals are already dropping profusely from the flowers on most of the younger trees. The frosts of the last few nights seem not to have done serious, if any, damage to any kinds of fruit, and not any to the prunes, as they were protected by the blossoms. In the next ten days, however, there may be considerable damage done to the prunes in case of heavy frosts, as the forming fruit will soon be about as large as grains of wheat and in its most tender state.

The prices for prunes at present remain firm at 2½ cents for the sizes from 120 to 150 and 2½ cents for from 100 to 120. The average realized for the four sizes from 60 to 100 is 4½ cents. During the past week a carload of peaches, one of apricots and three carloads of prunes were moved out. Two carloads of prunes have been sold, to be delivered next week. There are no prunes of the size 40 on hand, and less than a carload of the 50 size. The stock of very small prunes is also all cleared out.

By the end of the coming week everything but the prunes will be cleared out by the Exchange. There is on hand at present only about a ton of pears and a few plums. The small amount of apricots and peaches remaining are of good quality. By the close of the coming week there will be about thirty-five tons of prunes, which is the same amount that was on hand in the Exchange warehouse at the same time last year. There are still five or six weeks left for lively operations in dried fruits, and the stock on hand will easily be cleared out. All the fruit in the warehouse is in prime condition, free from moths and worms. There has been no complaint of any carload that has been sent out by the Exchange. Purchasers in

the East and also brokers and commission houses on the coast feel assured from their experience with the trade here that they will receive full weight and quality, and whatever the fruit is represented to be in the contract it will prove to be at the time of delivery.

### Observations in the Argentine Republic.

Many readers of the RURAL PRESS will remember Mr. J. M. Sinclair, Commissioner of the Victorian (Australian) Government, who visited California last summer to study our agricultural methods. From here he journeyed through Canada and our Eastern States and to the Argentine Republic, and was in the latter country at last accounts. His object was to gain information regarding agriculture in different lands, and at the request of Secretary Friedlander he promised to forward some information regarding the Argentine country. In compliance with his promise Mr. Friedlander has received the following:

BUENOS AYRES, February 18, 1895.

T. C. Friedlander, Esq.—DEAR SIR: You asked me to write you after visiting the Argentine Republic, and I now fulfill my promise. After leaving California in September last I traveled through the States, Manitoba and Canada, and then came here in January. I have just completed a trip of 1700 miles through the Republic and have visited all its agricultural districts. It is a very fertile country, although subject to droughts and visitations of locusts, which may at any time destroy the chances of a good crop being obtained. The grain-growing is conducted chiefly by Italians, who live in a miserable way and have their women and children working in the fields. The area under wheat this season is put down at from 5,000,000 to 6,000,000 acres. This area could be increased to 50,000,000 acres without taking in any poor land. The area under wheat cultivation will not, however, be likely to increase very rapidly, unless an improvement in prices takes place, the present ones leaving the farmers nothing for their labors. There was a large increase in acreage last season and every promise of a good crop, but a severe frost in December did an immense amount of damage, which is only now becoming apparent as threshing proceeds. Threshing is about half completed and has with a certainty demonstrated the fact that the total crop will be from 30% to 50% under last year's total. Last season 1,600,000 tons of wheat were exported; this year will give a surplus of from 800,000 to 1,000,000 tons, with a certainty of not over the latter amount. A great deal of the wheat is very thin in sample. The maize crop is a good one and there will be 1,000,000 tons for export, against 60,000 tons last year. There will be about 300,000 tons of linseed for export also. With kind regards, yours faithfully,

JAMES M. SINCLAIR.

### Gleanings.

THE Hanford Journal declares that an extra large crop of good-quality honey is predicted for the counties which are represented in the association—Kings, Fresno and Tulare.

PLEASANTON Times: The large almond orchard belonging to A. T. Hatch and consisting of about 120 acres, lying near the Cameron property north of town, is now undergoing a general overhauling, while the trees are all being grafted into prunes.

TWO YEARS AGO W. J. Prettyman of Porterville sold his home and citrus orchards and started out to find a new location. After a long period of traveling about, he has concluded that there is no place like the old place, and last week he repurchased it.

THE Central California Beekeepers' Association has elected the following named officers for the year: J. C. McCubbin, of Selma, president; G. X. Wendling, of Hanford, secretary; H. M. Moore, treasurer, re-elected; vice-presidents—Hon. Firmin Church, of Fresno, Fresno county; J. F. Flory, of Lemoore, Kings county; Mr. Bolden, of Tulare, Tulare county.

WM. BIELAR, of Willows, has built a traction road wagon propelled by a one-horse steam engine. The movements of the wagon are controlled by a steering gear at the will of the driver. The wagon has space for a quarter of a cord of wood and a tank holding water enough for a three hours' run. Over a reasonably good road Mr. Bielar can run his wagon at the rate of twelve miles an hour.

WILLOWS Journal: If you have but \$200, young man, buy an acre or two of land; put up your cabin and chicken-house, invest all your spare money in chickens and take good care of them. At the end of twelve months your capital will have increased to \$1000, or five-fold on your investment. Two things are necessary—a place to work and the will to work in it to make a tramp or idler independent.

A RENTON, Michigan, dispatch of 29th inst. says: From 150,000 to 200,000 new peach trees were set out this year in Berrien county. Since the appointment of special commissioners to examine the trees for signs of yellows this blight to the peach has been kept well under control. The crop of 1895 is assured against the danger from extreme cold, and the fruit prospects in this section for the coming season are very encouraging.

A SALEM man forged the first aluminum horseshoe ever made in Oregon. It is a revolution to the horsemen of Salem, being only one-sixth the weight of a steel shoe, and at the same time being superior to the baser metal in all qualities of ductility, strength and resistance to wear. A horse with a complete outfit of these admirable foot guards is in a condition to do better and more work than it could possibly accomplish without them.

WOODLAND Mail: A rubber track is the next big improvement talked of, says the Breter and Sportsman. It is estimated that the cost would be \$100,000, but it would pay. Rain would not affect it, and it would last for ages. With pneumatic rubber saddles and India-rubber racetracks, all that is needed now to make racing a bouncing success, as it were, will be pneumatic rubber hoof plates and automatic rubber drivers and jockeys warranted not to slip a cog or job a race.

HANFORD Journal: W. Barlow, a farmer who resides a few miles west of Traver, has had an experience in keeping Jack Frost from doing any injury to his orchard, which might save money to others. Last year he had just finished irrigating his orchard when the frost came, which swept away all the apricots and peaches in this county. His escaped. Believing that the irrigation saved the fruit, upon the appearance of the frosty weather this season he at once went to irrigating again, with the same good result. He saved the fruit again



this year. The subject is one well worthy of investigation by all our horticulturists, for the water is right at hand to nearly all of them, and its application might save them from heavy loss.

**SANTA CRUZ Surf:** On account of the excessive rates on fruit from this place to Gilroy, the Pajaro Valley Fruit Exchange will not dry fruit at the latter place this year. The freight last year from Pajaro to Gilroy was \$1.40 a ton, and the Exchange asked to have a lower rate made. A few days since they received word from the railroad company stating that they had given them a gilt-edged rate—\$1.40 a ton from Watsonville to Gilroy. The directors of the Exchange did not think this so gilt-edged, so they have concluded not to do anything at Gilroy, but instead will put up an evaporator in this vicinity and go into business on a small scale. As the railroad company has made contracts with the sugar-beet raisers of fifty cents a ton from Hollister to this place, the directors naturally think that the company is discriminating against them.

### Rainfall and Temperature.

The following data for the week ending 5 A. M., April 3, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week. | Total Seasonal Rain-fall to Date. | Total Seasonal Rain-fall Year to Same Date. | Average Seasonal Rain-fall to Date. | Maximum Temperature for the Week. | Minimum Temperature for the Week. |
|----------------------|------------------------------|-----------------------------------|---------------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|
| Eureka               | 1.20                         | 37.96                             | 49.61                                       | 35.66                               | 74                                | 34                                |
| Red Bluff            | T                            | 28.94                             | 19.15                                       | 21.46                               | 70                                | 38                                |
| Sacramento           | T                            | 22.70                             | 13.85                                       | 17.79                               | 68                                | 40                                |
| San Francisco        | 46                           | 33.87                             | 16.10                                       | 21.37                               | 64                                | 40                                |
| Fresno               | 52                           | 12.63                             | 6.17                                        | 10.06                               | 76                                | 36                                |
| Los Angeles          | 1.52                         | 14.92                             | 6.40                                        | 17.67                               | 74                                | 40                                |
| San Diego            | 45                           | 11.10                             | 3.98                                        | 9.48                                | 68                                | 42                                |
| Yuma                 |                              | 2.97                              | 2.16                                        | 3.45                                | 96                                | 42                                |

### Weather and Crops.

Reports for March Made to the State Weather Bureau—Apricots Badly Frosted—All Other Crops Promising.

The month of March has been one that was deficient both in temperature and rainfall. Considerable damage was done by the severe frosts of the 14th, 15th, 29th and 30th to apricots, almonds and early cherries, but the damage being greatest to apricots, which will be greatly decreased in yield. Several fine orchards were nearly destroyed by the frost of the 29th that had escaped the frost of the 14th and 15th. All other fruits will be abundant, while the grain prospects continue good in all quarters of the State where raised. The abnormal weather of February advanced the growth of fruits so as to bring them at least ten days earlier than usual, which is the cause of unusual damage done by the few frosts of March.

The average temperature for March at the several Weather Bureau Stations was as follows: Eureka 48°, Fresno 54°, Independence 50°, Los Angeles 56°, Red Bluff 52°, San Francisco 52°, Sacramento 54°, San Luis Obispo 52° and San Diego 56°. As compared with the normal temperature a deficiency occurs at all stations named of from 1° to 3°, excepting San Diego, whose average temperature was the same as normal.

The total precipitation for March was as follows: Eureka 5.30 inches, Fresno 1.80, Independence 0.10, Los Angeles 3.80, Red Bluff 2.60, San Francisco 1.90, Sacramento 1.20, San Luis Obispo 2.40 and San Diego 1.40. As compared with the normal precipitation there is shown a deficiency at all points of from 0.01 of an inch at San Diego to 2.08 inches at Sacramento, while Fresno shows an excess of 0.48 of an inch over the normal rainfall for March.

**ALAMEDA (Niles)**—The rains of this week have been beneficial to pasture. Early vegetables look well; barley is making good growth. The apricot crop promises to be light, especially Moorpark. Peaches will be a good crop. Cherries are in full bloom, but it is feared the late rain will injure them. Prunes are setting full of blossoms; very little injury from the late frosts; hail on the 28th. Rainfall for the month, 2.15 inches; highest and lowest temperature, 76° and 41°. **(San Leandro)**—The splendid weather of this month, with over two inches of rain, has been just the thing for the farmer and gardener. It looks now as though there would not be many tomatoes platted, as the canners refuse to give contracts this year. Green peas, beans and grain are doing finely. Cherries are in full bloom; apricots well advanced, and if nothing happens there will be a fine crop.

**AMADOR (Jones)**—Crops growing well. The few days of sunshine favorable to growth. The ground not too dry. The present rain tends to favorable crops.

**BUTTE (Durham)**—The conditions have been very favorable for the growth of crops, and, with the exception of some very late sown grain, both wheat and barley are looking well. With the exception of apricots, the fruit crop promises to be good. No injury was done by the frosts of the 29th and 30th. Rainfall for the month, 2.40 inches; for the season, 27.19 inches. **(Pentz)**—Crops of all kinds promise an abundant harvest. No damage from the frosts in the early part of month. This morning we had a light frost but no damage was done. There were only four entirely clear days during the month. For six

days more or less rain fell; nineteen days cloudy; two days quite windy, 13th and 21st. On the 14th there was a hail-storm, and another light shower of hail last evening, but not enough to do any damage. **(Houcutt)**—Crop conditions are fine—never looked better during the month of March.

**CALABERAS (San Andreas)**—The weather never has been better for crops and one almost fancies he can see the grass and grain grow. The crops all over look very promising; grain has already reached a height of eighteen inches. **(Milton)**—Weather has been favorable for grass and grain, rain coming in time to prevent check to growth. Frost killed the apricots in low places. Other fruits not injured and prospects good.

**COLUSA (Sites)**—We have had a couple of good rains during the last two weeks, and crops are almost a certainty, as there is lots of moisture in the ground. **(Colusa)**—Weather most favorable for all kinds of crops. Heavy frost on night of the 28th, but no damage to fruits. Winter-sown and volunteer grain looking exceptionally well and summer-fallow on high lands in first-class shape.

**CONTRA COSTA (Martinez)**—The spring thus far has been, so far as the weather conditions are concerned, all that could be desired. The frost did little or no damage, and the show-ers have come very opportune.

**FRESNO (Reedley)**—Taken altogether, March has been a very pleasant month—good growing weather. Grain is growing very fast, in fact too fast. Prospects were never better for a good wheat crop. There were quite heavy frosts on the 14th and 15th, but not much damage was done except a little to apricots. **(Fresno)**—Everything most favorable for large crops. Frost of month did no damage in Fresno district. Rain of the 27th insures good grain crops. Cutworms have appeared in some vineyards—not with damage as yet. Where wheat is not full of weeds the prospects are favorable for a large crop. Peach trees are full of blossoms. Some apricot trees will have a large crop; others will not. The frost of 14th inst. destroyed all the young shoots on Malaga vines. **(Huron)**—The last rain has been of great benefit to the crops and sheep feed on the plains. There will be a light crop of grain on the plains but a full crop in the sinks of the Posa.

**GLENN (Fruto)**—Grain crops have grown fine under favorable weather, having had a splendid rain. Fruit and early vegetables have been badly damaged by frosts during the month. Apricots are almost a total failure, also early plums and cherries. Peaches will make a fair crop.

**HUMBOLDT (Hydesville)**—Weather of February and March generally good for farmers and stock-raisers. Farmers are well up with their work. Grain is up and looks fine. Fruit trees just budding out (28th). Feed on stock ranges good and stock in good condition.

**INYO (Independence)**—Apricot and peach blossoms damaged badly by frost and will only be a small crop. Warm weather first part of month brought out blossoms, which were injured by subsequent sudden changes. Very little garden truck planted yet to be injured.

**KINGS (Hanford)**—Prospects are good for a large crop of fruit of all kinds, except apricots. Grain and alfalfa doing well, and the rain of the past few days insures a good crop in districts outside of irrigated belt.

**KERN (Calloway)**—Early apricots were damaged in some localities by frost of the 29th, but not to a great extent. Other fruits not damaged. The rains of the 27th and 28th were badly needed, and good crops of grain and hay are promised, even without later rains. Grain and alfalfa is in excellent condition. **(Bakersfield)**—The month has been favorable for good crops until the 20th, when we had a killing frost, doing much damage to early potatoes, beans and all tender plants. Apricots, almonds and early flowering fruits suffered the most. There will not be more than one-fourth of a crop. Late fruit is uninjured. The prospect for hay crop was never better. Grain and alfalfa are doing as well as can be desired.

**LAKE (Upper Lake)**—The late frosts and rain have injured the early fruit, and in many places it will be a total failure. **(Kelseyville)**—The present outlook for a fruit crop is excellent, and if there is no bad weather for a few weeks more an abundant yield will be assured.

**LOS ANGELES (Covina)**—The orange shipment for March has been very heavy until toward the latter part of the month, when shipping was more quiet. Cereals doing well. The appearance for deciduous trees is favorable. Small shipments of strawberries daily. **(Los Angeles)**—Generally favorable weather conditions prevailed during the month of March for the growth of crops, which are well advanced and promise excellent results. The rainfall was in excess of the average and the generous precipitation at the close of the month benefited vegetation and will prolong the season for grass crops and will delay irrigating of orchards. Deciduous fruits blossomed freely and are reported to have set well. **(Pasadena)**—The month was of average temperature, although the heaviest frost of the winter which did no damage occurred in it. The rainfall was nearly double the average, but fell just so as to do most good. All fruits except apricots are setting very heavily; the former are a trifle light. Oranges are over half shipped and the trees are now one mass of blossoms. Grain is tall and rank, some being cut now for hay. By far the finest season to date that has ever been recorded. Rainfall for season, 22.08 inches.

**MADERA (Madera)**—Crop prospects are the best. The late rains insured good crops from early sown grain. The late sowing will need rain later. Hay crops could not look better. The heavy frosts have injured apricots and early prunes considerably, but good crops are yet on the trees uninjured. Peaches, nectarines and pears not injured. Grapes are mostly dormant yet and are uninjured. **(Raymond)**—Crops in good condition.

**MARIPOSA (Mariposa)**—Grain and grass look favorable generally. The heavy frosts during the middle of the month have probably damaged almonds, peaches and apricots to some extent.

**MENDOCINO (Hermitage)**—Grain is growing fine since the rain; there is nothing to hinder having a good crop. The fruit crop is injured by the frost. Peaches are nearly all killed. **(Ukiah)**—Recent rains, to the amount of 4.80 inches, have interfered considerably with spring plowing. Grain and hay prospects are very good. There was some damage to fruit prospects by the heavy frosts of the 14th and 15th and those of the 29th and 30th, but not to so great an extent as was at first supposed.

**MERCED (Merced)**—The crop about this vicinity looks splendid so far, and the prospects are very encouraging. The late rains have been beneficial by softening the thin crust which had formed upon the surface of the ground and causing the grain to revive wonderfully. **(Volta)**—Weather conditions generally favorable to crops. The rain was very beneficial to late sown grain and to pasture. It will probably make early grain too rank. No damage from winds or other causes during the month. **(Los Banos)**—The effect of the weather on the crops this month has been very beneficial and from appearance now there will be a good crop raised. Hail, frost and wind have done no damage as yet. The late rains have been all that is needed to insure crops, and every one is jubilant.

**MONTEREY (Jolon)**—The early fruit, especially almonds and apricots, was killed by the frost of the 14th and 15th. Barley was injured to some extent by the frost, but very little damage was done to wheat. The late rains have revived the crops that were hurt and it is thought that little permanent injury will result. The prospect is excellent.

**NAPA (Napa)**—The frost from the 13th to 17th and on the 19th of the month did little or no damage in this valley, the fruit not being far enough advanced to be injured by it. All fruit trees are or have been in bloom and the fruit is setting well,

The outlook for the fruit crop is very good. The hay and grain crops are all looking fine. The warm weather and warm rains have been of great benefit to the growing crops. **(Napa Junction)**—Crops in this vicinity are looking extremely well.

**NEVADA (Chicago Park)**—Two heavy frosts did some damage, but still left enough for a good crop. Peaches, plums, cherries and almonds nearly all out, but in many cases were only saved by heavy fires and smoke during the coldest part of the nights of frost. Pears are beginning to open.

**ORANGE (Tustin)**—Outlook for general farming crops and pasture unusually good. A large acreage of barley was sown and the last rain insures the crop. Oranges have moved very slowly for past three weeks. Reports as to prospect for apricot crop vary greatly.

**PLACER (Roseville)**—About 1½ inches of rain fell in the latter part of the month, being just what was wanted, as there is considerable late grain in. Wheat, barley and hay look well. The fruit promises well, except apricots; they are pretty near a failure. **(Lincoln)**—General outlook favorable for good crops in this section. Late frosts did no serious damage to fruit, all kinds of which give promise of full crop. **(Loomis)**—No damage done here by the frost in the middle of month. The late warm rains have done a great deal of good, especially to hay crop and young trees set out this year. Prospects are excellent for an immense crop of all kinds of fruit. Strawberries are well advanced and with warm sunny weather will be ripe in two weeks. **(Nowcastle)**—The weather for this month has been favorable for all crops, the fruit crop especially. Light frosts did no damage to fruit. Fruit has set well, or sufficiently so, on nearly or quite all varieties to warrant a good average crop.

**RIVERSIDE (San Jacinto)**—Crop conditions were very favorable for past month. Sufficient rain has fallen to insure good crops. Crop of almonds is assured, and deciduous fruit will be plentiful, by present outlook. Prunes are now in full bloom. **(Riverside)**—Month favorable for all crops. Trees doing well and full of bloom. Very large area planted, mostly deciduous; very many citrus trees are being planted also. Weather verged almost on a drouth until the 27th, when 1.75 inch of rain fell, fully assuring all grain crops.

**SACRAMENTO (Union House)**—Crops are looking exceedingly well, although a light acreage is sown. Late rains are a great benefit, both to grain and to summer-fallow, as ground was getting hard. **(Elk Grove)**—Wheat crop, fair. Fruit crop: peaches, big crop; apricots, half crop; all other, fair. Weather fine for growing purpose. **(Galt)**—The showers have been so uniformly distributed during the month of March as to do the most good and be of greatest benefit to growing crops. Late sown grain has been benefited by the March precipitation and good crops are now pretty well assured all along the line. **(Sacramento)**—The fine rains have caused the grain to grow very fast and the crop is sure to be heavy. There will also be a good hay crop. The late frosts have done no damage to the fruit crop in this locality. Bartlett's are late in blooming, but will be out in full in another week. Farmers are looking for a prosperous season. **(Clay)**—Crops growing finely. The rain of the 27th and 28th will help all grain, the late-sown grain the most. Oats beading out. Cherry and apple trees in bloom. Frost did no damage. Farmers still plowing summer-fallow, the late rains leaving the ground in fine condition to plow for some time yet.

**SAN BENITO (Hollister)**—The rains during the past week have greatly benefited the grain and feed. The prospect is now for a very heavy yield.

**SAN JOAQUIN (Lockford)**—The rain has greatly benefited the crops. The frost of a fortnight ago did considerable damage. **(Lodi)**—The weather, generally speaking, has been favorable to all crops. Grain doing well, average less than one-half the usual amount. Pasturage good. Hay crop promises to be abundant. Apples and pears in bloom. All fruit making good showing. The frost of the 14th and 15th did but little damage. Farmers busy plowing and preparing land for summer crops, of which there will be a larger acreage than usual. **(Stockton)**—This part of the San Joaquin valley has never fared better at the hands of Providence. The rains have been most opportune, as well as fine growing weather. The farmers, as well as all others, are jubilant over the prospects for the largest of all crops for several years past. We cannot see how the prospect at present for immense yields both from field and orchard can possibly be surpassed or improved.

**SANTA BARBARA (Los Alamos)**—The weather for the past month has been very favorable for all kinds of growing crops. The prospects for an abundant harvest were never brighter. Warm weather, followed by severe frosts, has been very damaging to huddled fruits. **(Santa Maria)**—Weather conditions unusually favorable for this time of year. Grain doing well. Grass on ranges thrifty. **(Ballard)**—Light showers on the 12th, 17th, 20th, 27th and 28th, followed by frosts that injured apricots but slightly. Other fruit untouched, and doing finely. Peach crop, as usual in the Santa Ynez, will be very heavy. Cereal crops could not be in better condition; volunteer beading out. Nothing but prolonged north winds can prevent immense crops. **(Carpenteria)**—The prospects for crops are fine. The pleasant days gave ample time for cultivation and sowing what grain had not been sowed. The rains came just in the time needed, warm, gentle and steady. No high winds or frost of any note. Land in fine order for beans, the staple product here in this valley.

**SAN BERNARDINO (Redlands)**—There is a big lot of snow on the mountains, which will keep the supply of water up to the highest notch until away along in the summer. The apricot crop will be light. From all we can learn, southern California will have nearly an average crop, because of new orchards.

**SANTA CLARA (Milpitas)**—Weather favorable. Crops growing well.

**SANTA CRUZ (Watsonville)**—Prospects for crop good. Valley lands will be put into summer crops, except a small portion that will be put in barley. Have had heavy frosts during month, that destroyed first crop strawberries; also considerable damage to apricots and peaches.

**SAN DIEGO (San Diego)**—Crops in San Diego county were never in better condition. Although the amount of rainfall has not been much over the average, yet the rains have come distributed along just right. Fruit prospects are also good. No frosts have been reported. The honey yield will be a large one.

**SAN LUIS OBISPO (Paso Robles)**—Weather continued warm until the 14th of the month, minimum temperature ranging from 40° to 48°. The 14th, 15th, 16th and 17th were all frosty mornings, with freeze. Minimum temperature on two of these days registered 26°. This resulted in disaster to all fruit trees in bloom, and some damage to vegetation. Almonds and 'cots were entirely destroyed, as also the greater portion of the Oriental plums and all the early blooming varieties of peaches. Grain was injured in swales and low places in fields quite materially. Hardy vegetables were badly cut. First rain of consequence for the month was on the 20th, .33 inch. This shower was welcome, as crops were suffering for want of surface moisture. Rained again on the 27th and 28th, making total for month 1.28 inch. Grain crops in general are looking well, and are now assured. **(Bollevue)**—Crops of grain are very spotted; those on loamy land were well put in and are doing very well; those on low adobe land are slightly drowned out and some have been eaten by worms, but in all, prospects are good. Apricots have been badly injured and thinned out by frost, rain and wind. Peaches have suffered very little. Plums and pears are looking fine. Pasture is very good and all stock is doing well. **(San Luis Obispo)**—Frost on the 14th, 16th and 17th did



some slight damage to fruit. Rains were well distributed through the month and were very beneficial to grass and all growing crops. The weather has been generally warm for the season, with about the average amount of sunshine. All early crops are well advanced, and late ones are making good headway. (Santa Margarita)—Everything is looking very favorable, although we had quite a frost on the 13th, 14th and 15th insts., but not severe enough to hurt anything. (Arroyo Grande)—The spring rains have made a good crop all around almost a sure thing. Pasturage is fine and the dairies are doing a rushing business. The frosts did little damage, except delaying early vegetables. Apricots and other fruits are in good shape so far for a full crop.

SOLANO (Batavia)—The weather during the month of March has been very beneficial to all growing crops. The late rain was a great benefit to the late-sown grain, also to summer-fallow. The heavy frosts during the middle of the month injured the apricot crop, killing about two-thirds of it, but all other fruit escaped with little damage.

SONOMA (Sebastopol)—March weather has varied from that of delightful spring to cold days with north wind; several mornings with very white frost and mercury at 28°, and during this last week a day and a half of heavy rains. Still fruit does not appear to be damaged seriously, although peaches are reported to be dropping, particularly the clings. Prunes and cherries, though in bloom, were not far enough advanced to be affected by the frost. Results of late rain not yet known. Apples not yet in bloom. All grain doing finely.

STANISLAUS (Westley)—Progress of crop up to present is good. The wheat and barley sown in November, December and January promise large crops, but that sown in February will not make over half a crop unless more rain should fall next month. The north wind of the last two days is very bad on late-sown grain. Two nights' frost of this month damaged some fruit. (Newman)—Never in the history of the west side was there any better prospect for a big yield than this season. The weather so far could not be more favorable, and only the most extraordinary accident might injure the good prospects somewhat. Fruit suffered, though, a little by the late frosts, but not enough to make any great difference. (Crow's Landing)—The outlook for a good yield is very promising. The rainfall for this week has been .80 of an inch, and has assured a fine stand for the late and winter sown grain. The fallow grain could not be better. The weather all through March has been beneficial to grain and vegetation. There was some frost, which has injured the apricot crop in this vicinity. The ground is thoroughly wet, and, with an average April, assures us a large yield of grain. Take it all in all, the "west side" never looked more promising than now. (Turlock)—The month has been all that could have been desired for all kinds of crops except for the three killing frosts during the middle of the month. They killed most of the apricot crop. Peaches and almonds have set fuller than for the last three years. The frost of the 28th and 29th I do not think will do any damage, not being very hard here. Nearly all the early rye is headed out. Volunteer barley heading out also.

TEHAMA (Vina)—All crops are looking well. High winds have not caused any damage. There have been slight frosts, but no damage. The apricot crop is short. All varieties except Royal are a failure; other fruits good. (Corning)—General rains; weather favorable for grain and fruit; no frosts of any note; grain acreage, thirty per cent less than last year; prospect for yield, twenty-five per cent more than 1894. Fruit crop prospects, full yield, except apricots, which will be fifty per cent less than last yield. Large acreage of citrus and deciduous fruits planted. Weather generally satisfactory. Season's rainfall, ten inches more than average.

TULARE (Lime Kiln)—The weather during March has been very favorable in all respects. The highest temperature was 77° on the 3d and the lowest 31° on the 14th and 15th. The frost of the 14th and 15th caused no damage to citrus trees, although damaging the apricots and early peaches to some extent, but not so much as at first thought. The storm of the 28th was just the thing for grain and feed, and with one or two more showers from now on will insure good crops. The rain retarded orchard work, but nothing to cause any complaints, for it has done more good than harm. (Goshen)—The condition of all crops in this vicinity is very fine. We have just had about .75 of an inch of rain; and if the winds are not too high and long continued, crops will be very heavy. (Tulare)—All cereals far advanced and in excellent condition; prospects never better for immense crops. Apricots suffered from frost and will be light. Peaches suffered also, but not as much as apricots. Plums and prunes not suffering, neither pears, not being as far advanced. All kinds of vegetation growing splendidly. (Visalia)—At present nothing could look better, with the exception of the apricot crop, which I think is entirely ruined by frosts. I do not think the peach crop injured enough to do any damage; nothing else hurt at all. All grain first-class; could not be better.

VENTURA (Saticoy)—Weather mild for the past week, with 1.40 inches of rain, making the total for the season 15.85 inches, which insures at least fair crops. (Fremontville)—The first half of the month was dry and barley grew slowly, but since the 13th we have had abundant rains, and the outlook for all kinds of crops is exceedingly good now. The fruit trees here are young, but apricots are heavily covered with fruit and other kinds are equally promising. (Nordhoff)—The twenty inches of rain in this section, coming gently as it has, did far more good than twice that amount falling in torrents. Fruit trees will now make up the partial setback they had last year; and the fruit crop here, in all lines, promises to be an exceptionally large one. A good grain crop is certain now, and hay will be so plentiful as to insure a profit, instead of a great loss, to stock raisers. Hay-making on some ranches will commence in two or three weeks from now. (Ventura)—The rains this month have been timely and abundant. Farmers are, as a rule, satisfied with the season's rainfall. There has been less damage to fruit by frost than was supposed earlier in the month, and the reports from the apricot growers are favorable for a good yield. (Hueneme)—The weather in the early part of the month was not very beneficial to crops, on account of a little drying and the cold, but the rain of the 27th and 28th has overcome these difficulties and crops are promising.

YOLO (Winters—Mt. Glenwood)—Grain and hay crops never looked better at this season of the year than at the present time in this vicinity. No frosts at this station, except slight trace on the morning of the 14th. No damage done to either fruits or vegetables. Along the low lands on Putah creek, near the town of Winters, apricot crop and vegetables damaged seriously by frost. (Dunnigan)—Summer-fallow wheat is quite large; winter-sown wheat and barley short, but promise a fair crop. Fruit of all kinds damaged to some extent by frosts. Plowing benefited by last few showers. Summer-fallow plowing about three-fourths done. Indications point to an average crop all around. (Capay)—The almonds are all right, notwithstanding the reports to the contrary. Especially is this true of those transplanted from Clarksburg. (Blacks)—The grain is growing rapidly and it is likely that there will be a great deal of straw unless there is more than the usual amount of wind.

YUBA (Marysville)—Weather continues favorable for good crops. Frost has done very little, if any, damage. (Wheatland)—No damage from frost so far, but fruit is kept back by cold nights. Grain has been much benefited by recent rain, especially late sown. Hop-pruning is in progress; so far, the roots look promising.

THE FIELD.

Wheat-Growers' Reports Reviewed.

TO THE EDITOR:—I have read with some interest the reports of your various correspondents relative to the cost of producing wheat in California. While I am what might be termed a city farmer, it seems to me that some of your questions have not been judiciously framed.

In the first place, why should you desire to know the cost per bushel when it is no longer measured, purchased or sold in that manner? You might as well ask how much per pound it costs to raise or manufacture wine at seven pounds to the gallon.

Second—I think the estimate should have been asked irrespective of the value of the land, as some correspondents might have raised their wheat on land situated near a city and valued at \$500 per acre.

Third—I think the inquiry should have called for the cost of cultivating the land per acre; this would have led each of your readers to notice how cheaply his competitors were cultivating their lands, and in that way arrive at a standard minimum cost.

In order to exemplify how intelligently your correspondents have understood your inquiry may best be shown by a tabulated result of their figures; by this you will observe that the actual cost of working the land, including the cost of sacks (which, by the way, should not be included) ranges from ninety cents to \$11.40 per acre. This, I think, shows conclusively the unreliability of the method adopted.

| GROWER.        | Amount. | PREVIOUS REPORTS TABULATED.          |          |                           |                           |                          |                          |                                  |                |                   |  |
|----------------|---------|--------------------------------------|----------|---------------------------|---------------------------|--------------------------|--------------------------|----------------------------------|----------------|-------------------|--|
|                |         | Net cost of labor, seed, sacks, etc. | Interest | 25 bushels or 1500 pounds | 20 bushels or 1200 pounds | 15 bushels or 900 pounds | 10 bushels or 600 pounds | Cost without regard to quantity. | Cost per acre. | Cost per 100 lbs. |  |
| F. Houghton    |         | \$4.25                               | .70      |                           |                           | \$4.85                   |                          | \$6.50                           |                |                   |  |
| W. W. Durban   |         | .90                                  | 5.60     |                           |                           | .55                      |                          | 1.16                             |                |                   |  |
| E. T. Reynolds |         | 5.80                                 | 4.20     | \$10.50                   | \$10.00                   | 9.45                     | \$9.00                   |                                  |                |                   |  |
| G. Koppel      |         | 5.80                                 | 4.20     | .66%                      | 11.40                     | 1.05                     | 1.50                     |                                  |                |                   |  |
| H. Morrison    |         | 11.40                                | Net      |                           |                           |                          | 6.40                     |                                  |                |                   |  |
| E. J. Sparks   |         | 5.00                                 | 1.40     |                           |                           |                          | 1.06                     |                                  |                |                   |  |
| E. J. Sparks   |         | 6.65                                 | 1.75     |                           | 9.00                      |                          |                          |                                  |                |                   |  |
| E. J. Sparks   |         | 6.90                                 | 2.10     |                           | .75                       |                          |                          |                                  |                |                   |  |
| E. J. Sparks   |         | 7.55                                 | 2.45     |                           |                           |                          |                          |                                  |                |                   |  |
| Peter Ahart    |         | 5.00                                 | Net      | 10.00                     | 5.00                      | 4.80                     | 4.60                     |                                  |                |                   |  |
| Geo. Ohleyer   |         | 1.20                                 | 3.50     | 4.50                      | 4.00                      | 4.80                     | 7.50                     |                                  |                |                   |  |
| H. Luther      |         | 5.00                                 | 2.80     | 8.75                      | 8.00                      | 8.25                     | 1.25                     |                                  |                |                   |  |

THE WRITER'S COMPUTATION OF COST.

I am cultivating several fruit orchards and have attempted to arrive at the minimum cost of cultivation, as well as the handling and drying of the products. I am also attempting to cultivate a grain ranch. I will give you my method of ascertaining the cost of raising wheat. I may not have correctly estimated such cost, but if correct, having arrived at it, it is an easy matter at the end of the season to divide the cost per acre by the number of pounds, and ascertain the cost of raising. In addition, if deemed proper, add the interest, taxes and sacks, thus making an estimate of its gross cost of production. I say gross, for in one sense I consider the interest a profit.

I have asked a great many farmers what it cost them to cultivate their land per acre; their universal reply has been, "I don't know, I do it as cheaply as I can." Perhaps, if they had gone to the trouble of ascertaining what the detailed cost was as they went along, they would have been in position better to govern the outcome. Each branch or product on a farm should be kept account of, and made as nearly self-sustaining as possible. The time is past when the farmer can pay "49" prices for labor and ignore the necessity of knowing every night whether his laborers have intrinsically earned their wages.

Value of Labor.—Labor is worth no more than the product will bring. In order to adhere to a fixed price for labor there must be a fixed price for the product. Through what I consider a false sentiment, many of our farmers have continued paying \$30 a month for labor, the same as they did when their wheat was bringing \$1.50 to \$2 per 100 pounds. As a rule most of the proceeds have gone up the road in rolls of blankets, or to the nearest saloon, which has worked no benefit to the workingman—of course there are many exceptions. The outcome has been the mortgaging of the farm. I am willing to pay for labor all, and only all, the product will bear, and had the farmers of California pursued this policy for

the past twenty years there would not have been as many farms mortgaged; our foundries, shoe and leather factories and woolen mills would have been running to-day, thus enabling us not to only keep many dollars at home, but to sustain employment for the many instead of the few.

I am aware that many of our farmers will ridicule this idea. Nevertheless, I am of the opinion that they have confined themselves too much to specialties and have done too little what might be termed general farming. In other words, they have sold but one or two things, wheat or barley, and purchased everything their credit would afford. Why go without milk and eggs, as many do, and purchase their butter, meats, vegetables, dried fruits and many other things they could raise or make exchange for? The following table shows my method of ascertaining the cost of cultivating land for grain. The cost of running the farm, other than that employed on the grain, should be met by the proceeds from hogs, cattle, horses, chickens, eggs and any other available product.

I will now give my figures of cost of wheat:

| Cost per day for eight 8-horse teams with drivers, foreman, stableman, cook, etc. |         |
|-----------------------------------------------------------------------------------|---------|
| 64 head of horses, 12 lbs. of grain each, 768 lbs. at 3/4c.                       | \$ 5.76 |
| 64 head of horses, 20 lbs. of hay each, 1280 lbs. at \$6 a ton                    | 4.08    |
| 2 head of horses, stable team                                                     | .26     |
| 1 huggy horse                                                                     | .15     |
| 8 drivers at \$20 per month or 75c. per day                                       | 6.00    |
| 1 foreman                                                                         | 2.00    |
| 1 cook                                                                            | 1.00    |
| 1 stableman                                                                       | .75     |
| 11 men's board at 30c. each                                                       | 3.30    |
| 1 blacksmith and general utility man, with board                                  | 1.30    |

Total.....\$24.60  
Will plow 32 acres; cost per acre......77

Harrowing.

Same cost per day, \$24.60; each team harrows 10 acres.  
Harrowing 80 acres; cost per acre.....\$30 3/4  
Second harrowing......30 3/4

Sowing.

4 horses for seeding, 2 horses to haul grain—6 horses' feed at 15c......90  
2 men on seeder, 1 man hauling—4 men's salary at 75c... 3.00  
4 men's board at 30c..... 1.20

Total.....\$ 5.10  
80 acres at \$5.10; per acre......07

Harvesting.

26 horses on harvester; feed at 15c.....\$ 3.90  
4 horses hauling grain......60  
2 horses, stable......26  
2 pair horses hauling water......30  
1 huggy horse......15  
4 men on harvester—1 at \$2, 3 at \$1.10..... 5.30  
2 men hauling grain..... 2.30  
1 man hauling water..... 1.00  
1 stableman......75  
1 foreman..... 2.00  
1 cook..... 1.00  
Board for 10 men at 30c..... 3.00

Total.....\$20.46  
Will cut 35 acres at \$20.46; cost per acre......58

Cost of material estimated at \$300 for purchasing new implements and harness. The repair for the above implements, which cultivate 2000 acres, has been included......15  
Seed 100 lbs. per acre......75

Summary of cost per acre.

Plowing.....\$ .77  
Harrowing (twice)......61 1/2  
Sowing......07  
Harvesting......58  
Seed (100 lbs.)......75  
Wear and tear......15  
Total.....\$ 2.93 1/2

It will thus be shown that grain at 75c. per 100 lbs. net, not including sacks, will take about 400 lbs. or about three sacks to the acre for cost of cultivation and seed. On this basis, without sacks, taxes or interest will cost:

|                                                                       |  |
|-----------------------------------------------------------------------|--|
| 10 bu. or 600 lbs., per 100 lbs., 48 1/2c.; add 1/2c. for sacks, 53c. |  |
| 15 " 900 " " 32 1/2c.; " " 38c.                                       |  |
| 20 " 1200 " " 24 1/2c.; " " 29c.                                      |  |
| 25 " 1500 " " 19 1/2c.; " " 24c.                                      |  |
| 40 " 2400 " " 12c.; " " 16 1/2c.                                      |  |

A slight extra cost should be added per acre in harvesting the heavier grain, the cost of plowing, harrowing and seeding being the same.

PREVIOUS REPORTS AGAIN.

In order to ascertain how reliable your method is in determining the cost of raising wheat, let us use the report from Modesto. Your correspondent states that it costs him 33 1/2 cents per bushel to raise wheat on the basis of ten bushels per acre, which is equivalent to \$3.35 per acre, out of which must be deducted \$2.10 interest, leaving \$1.25, from which deduct 25 cents for sacks, leaving \$1 per acre for plowing, harrowing twice, seeding and harvesting. On the other hand, take your Stockton correspondent in the same issue: He claims the cost at 97 1/2 cents per bushel, ten bushels equal to \$9.75 per acre, less \$4.20 out, leaving \$5.55, less 25 cents for sacks, leaving \$5.30 per acre actual working expenses, against \$1 per acre by the Modesto party.

San Francisco. EDWARD E. POTTER.

The Great Wheat Problem.

TO THE EDITOR:—The value of land on which wheat is raised varies so much in the different estimates of the expense as to considerably interfere with the result. We know that the price of land in many localities depends on other circumstances besides its fitness for growing wheat. Would it not be better therefore for the sake of clearness to leave this item out altogether in the calculation, and then every farmer could add it on for himself according to his



circumstances? It seems to me that the real annual value of the land is just the net profit from the crop raised after paying all expenses, including allowance for deterioration and fair wages for the farmer. If this is correct, it would show very different and perhaps more uniform results than those in which the land value is given at from \$10 to \$90 per acre.

Diamond Springs, Cal. JOHN P. DUNLOP.

### Raising Wheat by Irrigation.

TO THE EDITOR:—The question has been asked by many Eastern men, if raising wheat by irrigation was profitable in California; and knowing the wide circulation of your valuable paper in the country east of the Rockies, I thought the best way to answer their questions would be through the PRESS, if you will be kind enough to give space for a short article.

I will give my experience in brief. First, I will assert that raising wheat by irrigation in California is profitable, but irrigating wheat is never profitable. I mean by this that it will not pay to irrigate after sowing the wheat.

My observation and experience teach me that in almost all cases in California, farmers do not properly prepare their lands. It is the universal practice of our wheat farmers to plow but once a year. Plow, did I say? Scratch, I should have said, for they do not plow. I do not call stirring the surface of the soil from one to two inches plowing. Then they sow year after year in this thin layer of impoverished soil, never giving anything back as a fertilizer, and then depend upon providence or irrigation to make a crop. The fact is that California wheat-producing soils extend the entire length of her coast, and if properly cultivated and irrigated, wheat raising, to my mind, would be the most profitable business that farmers could embark in. Still I say, never irrigate wheat for profit.

I have seen wheat raised from Siskiyou to San Diego, and have noted the different methods of farming and the results, which were very varied. I have seen the farmers use what is known as the Stockton gang plows and scratch the surface barely enough to cover the grain and cut and scoriify the fields with ditches and ridges, preparatory to irrigating, making it impossible, with any kind of machinery, to harvest more than three-fourths of the grain, and then flood and drown one-fourth more, harvesting only one-half what they should have had, and then they wonder why they did not get more than six to ten cents per acre. I have also observed the results of another way, which is my way of raising wheat. It is this:

In the first place, plow the land from six to eight inches deep, then thoroughly irrigate. Then plow in the ditches and plow down the ridges, making the surface smooth, so that the grain can be harvested without loss. Put in the seed by sowing and using the disc or spading harrow to cover; or, still better, after irrigating use the disc to pulverize and loosen the soil so that it will hold the moisture, and then plant with a drill three inches deep. If this method of planting was practiced the farmers could depend upon a yield of from sixteen to twenty-four cents per acre.

It is still better to plow twice or practice summer-fallowing by plowing in the spring, permitting the land to lie idle during the summer, and then prepare and plant as above in the fall or winter. Lands handled in this way will produce from two to four cents more per acre than if plowed but once.

A roller should never be used on irrigated land. The more compact and smooth the surface is made, the more rapid the evaporation. The soil should be thoroughly pulverized with the common harrow. If the soil should be lumpy the "scrubber," made of plank, should be used to pulverize the lumps, after which use the common harrow.

Any ordinary land, whether hill or valley, prepared and planted as I have described, during the months of December and January, will never fail to yield a crop that will amply repay the farmer for all labor and expense and leave a handsome profit, provided, however, that a sufficient quantity of seed be planted. One great cause of the failure in wheat raising, with and without irrigation, lies in the insufficient quantity of seed sown per acre. As a rule the farmer sows about forty pounds per acre, whether sown early or late. Early sown grain does not require so much seed as if sown later. If sown early during the winter months it will stool to from fifteen to twenty stalks from one kernel, but if sown late will at once shoot up from three to five stalks and spread no more. Early sowing should have from fifty to sixty pounds per acre, while late sowing should have from seventy-five to eighty pounds per acre.

The soils adapted to growing wheat in California are what would be considered above an average in richness when compared with the soils of other wheat-producing sections of the United States, and if our farmers would practice deep plowing and turning under the stubble, instead of burning it off, they would find our soils inexhaustible.

Now I have asserted that raising wheat by irrigation in California is profitable. To prove this I will

give what I consider a fair estimate of cost of production, planting, harvesting, threshing, etc.:

|                                                                |        |
|----------------------------------------------------------------|--------|
| To plow from six to eight inches deep will cost, per acre      | \$1 50 |
| Ditching and other preparation for irrigation                  | 75     |
| Cost of water for irrigation                                   | 20     |
| Irrigating                                                     | 25     |
| Seed                                                           | 40     |
| Sowing                                                         | 15     |
| Covering with disc harrow                                      | 30     |
| Following disc with common harrow                              | 25     |
| Cutting with header and stacking                               | 1 00   |
| Threshing, at five cents per cental, and twenty cents per acre | 1 00   |
| Cost of sacks                                                  | 70     |
| Total                                                          | \$6 50 |

I believe the above to be a fair estimate of the cost per acre from the time of commencing to plow the land until the grain is ready for market. On a few acres the cost of production would probably be in excess of the above estimate, while if farming on a larger scale it would be less. I think it fair to say that the average price obtained for wheat throughout California is \$1 per cental, prices varying from 90 cents to \$1.10. On all lands that would be considered wheat lands in California the farmer can reasonably calculate on an average of twenty cents per acre by irrigation, giving to the farmer a net profit of \$13.50 per acre. Will it pay?

Right here I want to ask, which is better to farm, 100 acres and clear \$13.50 per acre, or farm 1350 acres and clear \$1 per acre? There is surely that difference in the two methods of farming. I have harvested, in Lassen county, California, 33.6 cents per acre, on new, unexhausted lands, the land being plowed once, then irrigated, and planted by harrowing in with common harrow, using eighty pounds of seed per acre; and I believe if the above rules were observed in growing wheat the yield would more frequently be above twenty cents than it would be below that amount. I will say to the Eastern inquirer, that we still have thousands of acres of these lands, that have as yet never been put to any use other than that of grazing. Come on: there is room for all.

Bakersfield, Cal.

### Another View from Stanislaus County.

TO THE EDITOR:—Being a farmer and a constant reader of the PRESS, I am greatly interested in the statements from farmers in different parts of the State concerning the cost of growing wheat, now being printed in the columns of your paper.

The statement of Mr. O. McHenry of Modesto in your issue of March 16th is one that attracts my attention particularly, as I am farming a body of wheat land no great distance from Mr. McHenry's; and from my experience in farming, it is impossible for me to grow wheat at the figures he gives. In his estimate of the cost of wheat, he says: "Wheat costs me per bushel in sack, including seven per cent interest upon value of land, 33½ cents if the yield is ten bushels per acre." He estimates the value of land at \$30 per acre. I figure the interest at seven per cent \$2.10 per acre, leaving the difference between the annual income of \$3.35 and the annual interest, which would be \$1.25, left to plow, seed, harvest and sack an acre producing ten bushels. How he can make \$1.25 accomplish so much is what I cannot understand. Mr. C. N. Whitmore of Ceres, in the same issue of March 16th, says it costs him \$3.38 per acre to plow, seed, harvest and sack an acre of wheat yielding ten bushels, which estimate will, I venture to say, voice the sentiment of sevenths of the farmers of this county.

Oakdale, Cal.

W. M. MUNCY.

## THE VETERINARIAN.

### Paralysis in a Cow.

TO THE EDITOR:—I have a Jersey cow which has for about six weeks been ill from what is supposed to be paralysis of her hind quarters and legs. She is now utterly prostrated by the disease so that for the past week we have been unable to milk her and have had the greatest difficulty in moving her from one part of the shed to the other. She appears to be in other respects fairly healthy. She eats alfalfa, hay and bran regularly and also drinks regularly. No one in this immediate locality seems to understand the treatment of her complaint, which is generally supposed to arise from acrom poisoning. I should be obliged if you would advise me as to the course to be pursued in her treatment, as she is a valuable cow. She is due to calve in July.

Redding, Cal.

J. H. MILES.

ANSWER BY DR. CREELEY.

The cow is suffering from a form of paralysis probably due to something she has partaken of in the way of food, which acts upon the nerve centers of the spinal cord. The treatment must be to counteract the effect of the poison. Cows just before calving are apt to get paralyzed and present the symptoms previously mentioned; but if the cow is not due to calve until July, then it is not parturient paralysis, and must be due to some narcotic taken in the way of food.

Treatment. Apply electricity two times daily along the spinal cord from the kidneys to the tail. A battery can easily be rented. In the absence of electricity, apply the following liniment along the same parts two times daily; follow with hot-water blankets as hot and as often as she can stand it.

Bandage the legs with dry woolen rags and feed vegetables, grasses and hot mash, giving no dry feed. It would be advisable to give the cow a good purgative before beginning treatment. Give internally the powders herewith:

#### PURGATIVE FOR COW.

Sulphate soda, 6 ounces; sulphate magnesium, 6 ounces; oil croton, 4 drops; mix and dissolve in water and give all at one dose.

#### LINIMENT FOR BACK.

Soap liniment, 8 ounces; chloroform, 1½ ounces; tincture iodine, 2 ounces; oil origanum, 1 ounce; oil rosemary, ¼ ounce; mix.

#### POWDERS—INTERNALLY.

Nux vomica, 1½ ounce; sulphate iron, 1 ounce; pulverized camphor, 1½ ounces; pulverized belladonna, 1 ounce; mix and make twelve powders and give two powders daily.

Dr. E. J. CREELEY.

## FLORIST AND GARDENER.

### Peanut Harvesting.

The U. S. Department of Agriculture has recently issued a "Farmer's Bulletin" on the peanut to which we object that it gives no recognition to California as a peanut-producing region. This oversight will, however, not prevent its statement from being interesting to our growers. Methods of harvesting which are approved in southern peanut States will be especially instructive here.

The nuts should be out of the ground before the first frost, as it is injurious both to the vines, when regarded as fodder, and to the kernels. It may be necessary to dig the crop some time before frost is feared, because early formed nuts when frost is long delayed begin to sprout, and the loss to the farmer from that cause would be greater than the gain from the maturing of the later nuts. Besides, if peanuts have been cultivated in the same land for several years the vines often will drop their leaves and are thus greatly injured for use of hay.

Peanut farmers have a plow made especially for harvesting this crop, which has no moldboard and has a bar three feet long and an upright the same as the other plows. The foot piece is welded twelve inches from the rear end and extends up five inches, with a small hole through it, to which is fastened the hind helve of the plow. The beam is as usual with handles fastened to either side of it. There is a duck bill on the flat end of the bar and a sword four inches wide and sixteen inches long welded to the bar five inches behind the duck bill and extending out to the right side diagonally and backward, so as to run under and cut the taproot of the vine.

This plow, with two horses attached, is passed up each side of the row deep enough to escape the peas, the long wing cutting the taproots, rendering them easy to remove from the soil. Following this plow laborers with pitch forks remove the plants from the ground, carefully shaking off all loose soil, and piling them in windrows, three rows in one. They are usually plowed in the morning, and then in the afternoon are stacked or shocked around poles seven feet high, set in the ground at convenient places in the field. In shocking, care is taken to keep the vines from the ground, the usual practice being to lay a couple of fence logs on each side of the center pole, and the plants are so arranged around the pole so as to have the pods inside, and also to leave some space next to the pole for the circulation of air. The shocks are usually capped with corn fodder or hay to keep out the rain.

After being thus stacked from fifteen to twenty days the pods are ready to be picked. This operation is usually performed by women and children, who are paid so much per bushel, and are expected to pick only the mature and sound pods. It is slow and tedious work and one of the largest items of expense to the peanut farmer. Some farmers leave their nuts unpicked until spring, but this subjects them to the depredations of the birds and animals, many of which readily eat either the nuts or the vines.

In the Wilmington section there is some variation from the above in the method of harvesting the crop. The vines after being allowed to remain in the ground two days after plowing are then pulled out and shaken free from soil and stacked around poles twelve to fourteen feet high, where they are allowed to remain about a week or ten days, and are then removed to large barns and stored away like clover hay until it is convenient for the planter to have his nuts picked. This peanut being much smaller than the Virginia or Tennessee nut and also more completely filling the shell, is not so easily injured as the larger varieties, and thus can be picked by machinery of the general nature of a threshing machine. Some dealers object to machine picked nuts, but the experience of those who follow that practice in harvesting their crops show but little difference in the price of hand or machine detached pods of the North Carolina variety, and what difference there may be in the price is offset by the saving in cost and the rapidity with which they can be put upon the market at any desired time. Besides it is claimed that the hay, after passing through the picker or threshing machine is in better condition for fodder than the hay from the hand-gathered peanuts. After the peanuts are picked they should be cleaned before being sacked.



## Patrons of Husbandry.

### A Patron's Views on the "Organ" Question.

TO THE EDITOR:—There appears in the issue of the RURAL PRESS of the 23d ult., an article under the caption of "To the Grangers of California," which seems to be a sort of open letter by the writer thereof to the Patrons of this State; and as such it may be considered open to comment and a certain amount of criticism by members of the Order of Patrons of Husbandry, to whom it is addressed. And if so, will the PRESS grant me the privilege of a small space for that purpose?

I will, in the first place, premise what I have to say by stating right here that, though not being a very prominent, able or brilliant member of the Order in the common acceptance of those terms, I have been a continuous and, so far as able, sincere member of the said Order since joining it in the year 1875 up to the present time, and I think I have the "Good of the Order" as much at heart and would do as much towards its advancement and support, as well as the principles it advocates, as any member of the Order, that is consistent with my means and ability.

The writer of the article mentioned sets out with the announcement of his desire to set himself and the RURAL PRESS in a correct light or position before the members of the Grange, in order "that no misapprehension may be had concerning recent action in the matter of the official organ." In this, his desire to place himself and the PRESS straight with the Grange in this State, I am in perfect accord with the writer, and, with one exception, heartily concur with what he has to say in justification of the course pursued by himself in reference to his connection with the publishing of matter sent in to the PRESS as the official organ of the Grange and to place himself right before those Patrons whose ear he could not in any other way reach; that is, in relation to the change made as to the official organ. If the editor could have gone into further details and explanations than he has, without making it a matter of public concern to readers not members of the Order, Patrons would have had a better insight into the whys and wherefores and reasons for the action taken, as spoken of in the article referred to, and I really believe, could Patrons understand or have placed before them in detail the reasons why the editor of the PRESS could not fully comply with the desires of the Executive Committee in relation to the editing and publishing of the Grange matter sent to him, they would entirely exonerate him from any desire to be arbitrary or exacting in relation thereto. Any one who may have had some experience in this matter of revising and editing Grange correspondence knows full well that considerable time and responsibility is demanded by the work, and the editor should not have been asked and expected to contribute space in the columns of the PRESS free of charge and also revise and edit Grange correspondence, in addition to the almost overwhelming amount of labor and responsibility thrust upon him by other departments of his paper; and, we may reasonably suppose, he could not fairly, in justice to himself, assume the extra responsibility and labor. I am of the opinion that it is no more than just and right to both editor and Patrons that all Grange communications intended for publication should be revised or edited by the Secretary, as he is the only officer of the State Grange receiving a regular compensation for his work in behalf of the Order. Would it not be well for members to think of this suggestion, and would it not be wise to consider this at the next election, whether it be a sister or a brother who aspires to this office in the State Grange?

There is, however, one feature of the article under criticism that I cannot

entirely endorse, and perhaps the writer thereof, if not just now, will eventually come to my way of thinking. This one feature is, that in the writer's comments on the ability and intellectual strength of the W. M. of the State Grange he has let himself run into the use of words and phrases not wholly in accord with the fraternal spirit that such associations as ours ought to engender in the bosoms of its members, and, I suspect, thereby runs into the error condemned in the attitude of the W. M.; providing it has been possible for the Worthy Master of the State Grange to have so far forgotten himself towards a brother Patron as to have shown pique or irritability to such a degree as to have caused provocation sufficient to call forth such expressions as appear in the said article. In fact, in my mind, the whole matter in relation to the depreciation of the W. M. is to be regretted and deprecated; for it does seem to me that the author of those remarks should have seen that it would have been at least politic, if not the part of wisdom, to have thought twice before allowing those expressions of sharp criticism to have appeared in print, no matter what the provocation. In the opinion of the writer of the expressions alluded to, the W. M. may not be of the strongest mind nor of the most brilliant intellect and yet be the most deserving of men and at heart an excellent Patron, and of intellect sufficiently satisfactory to large numbers of people not quite so exacting in this regard as the critic referred to. No man is infallible. Every one is liable to err; and if the Worthy Master has only erred in judgment, it is to be regretted. I should not charge it up against him as an unpardonable offense. And now I will let this part of the subject lie at rest.

In regard to the change that has been made in the official organ of the Grange, as a Patron I am one of those who are of the opinion that the change is in no way for the better. The RURAL PRESS is a well-known agricultural newspaper, having a circulation over a large extent of country, has quite a subscription at the present time among Patrons, is a paper of well-known standing and ability. I consider the editorial ability of the present RURAL to be, as an agricultural journal, the equal, if not the superior, of any newspaper on the Pacific coast. It is a paper devoted almost wholly to the agricultural and other rural industries and interests of the country; indeed, a very proper medium for the exchange of thoughts and ideas relating to farming industries—a periodical that has for more or less of the time since its inception been devoted to the interests and advocating the principles of the Patrons of Husbandry, and is known as such wherever circulating. This is the kind of organ that every Patron should and could take a pride in, knowing it to be the exponent of their principles and as the circulating medium of Grange news and other Grange information—a journal, in fact, that from its very appearance and character would have a tendency to elevate and advance the Grange in all directions.

Now what do we find in the new periodical, chosen under a grave mistake for the official organ of the Grange, to commend itself to Patrons or to farmers not Patrons? Well, a newspaper that I at least never knew had an existence prior to its having been chosen by the solons of our Order as the disseminating medium of Grange news—an obscure periodical devoted, as it says, "to literature" and "circulating in the best classes of society in Oakland." Assuming this devotion to "literature" and this claim as to circulating "in the best classes of society in Oakland" to be true, the fact would scarcely be a recommendation to me as a desirable one for a Grange paper. What connection can a paper with such a circulation have with the agricultural interests of the land which are the very interests the Order of Patrons of Husbandry was established to advance, support and protect? I do not wish in any way to detract from the probable known ability of the man-

agement and editorship of the paper referred to. It may be, for aught I know, one of the most cultured and literary of productions, and may undoubtedly suit its management and its subscribers, and its contents may be excellent food for them; but farmers, orchardists, gardeners, dairymen and others engaged in rural occupations desire a little more of the substantial productions of thought and some information relating to their varied occupations, although not objecting occasionally to some of the delicacies of a finer literature. To sum it all up, the periodical in question is not such a one as will interest an agricultural population to any extent, therefore, to my mind, one that will not be sought for to any degree by Patrons. As to its terms, so far as I have been able to learn, they are not in any degree more advantageous to the Order than those offered by the RURAL PRESS. As a matter of expense, the subscriber who desires and will have both agricultural and Grange news is obliged to put his hand in his pocket twice; then, when we come to the comparative value to him of the two journals, I have no hesitation in saying that the RURAL PRESS at \$2.40 per year is of much more value than the *Saturday Press* at a lesser price.

I heartily endorse all that the writer of the article under discussion has to say in relation to the office of the Secretary, and add that I am of the opinion that the apparent necessity of permitting its removal from San Francisco was a serious mistake and also an injury to the Order. In the position it now occupies it cannot be of that service to Patrons that it should be. It seems to me also that the action taken by the authorities of the Grange towards a revival of Grange interest could have been more effectively and uniformly performed by one deputy instead of the number sent out. There would then have been a uniformity in the work not possible by dividing it. I believe also that open meetings, conducted upon the plan of lectures on subjects of interest and of pecuniary value to farmers in conjunction with benefits accruing from becoming members of an organization of the Grange character, would have been of greater advantage and of more practical use to the Order.

In conclusion: My criticisms and comments are made in the most friendly and fraternal spirit, with a desire to do what I can for the good of the Grange. It is unfortunate that Patrons should do and say things that are made the cause of differences such as are shown by the article under discussion.

MORRIS WOODHAMS.

Temescal, Cal., March 27, 1895.

P. S.—As my letter to the RURAL PRESS, intended for publication in last week's paper, was too late to appear, I desire to supplement it by the following: In the editorial columns of the new Grange organ, in its issue of the 30th ult., there appears, together with other extraordinary utterances with which I can have nothing to do, the following language as applied to the RURAL PRESS: "A weekly journal published in San Francisco in the interest of raising vegetation and lowering literature;" and "it is neither my intention nor my permission that a person who cultivates literature with a plow shall gibber about the literary quality of this paper." Now, although a good deal might be said, I shall make no comments on the expressions quoted other than to say, that being a Patron and a farmer, such inuendos and slurs I care not to swallow without a protest. I call attention to them for the purpose of substantiating the position I have taken regarding the unsuitableness and undesirability of selecting a publication to be an exponent of Patron's interests which is in no way in touch with agriculture, and which pronounces itself as exclusively devoted to, and advocating other interests, and having nothing in common with the farmer. The feeling apparently underlying the remarks quoted has caused me to conclude that there is no existing sympathy between

the author thereof and the true Patron.

That no sincere Patrons may misunderstand the position I have taken let me quote from the Digest:

Any person engaged in agricultural pursuits and having no interest in conflict with our purposes, etc., may become a member of the Grange.

Does it not seem as if the interests of the editor of the official organ were in conflict with the above and consequently with the interests of every agriculturist, in the Grange and elsewhere, when he, so like Mr. Secretary Morton, slurs the calling of every one constitutionally entitled to be a member of the Grange, as he has done in the article I have quoted from?

M. W.

Temescal, April 1st, 1895.

From Bro. Amos Adams.

In printing the following article from Bro. Amos Adams it is only fair that we should say that the RURAL PRESS does not appear as a protestor against the action of the Executive Committee in its action in the matter of the official Grange organ. The RURAL PRESS is entirely willing that the committee should select one or a dozen organs. It was the policy of the Grange in its earliest days to get all the newspaper help it could, and the editor of the RURAL PRESS has often urged this policy in California. We have no objection to the recent action of the Executive Committee; but we have objected to misleading statements of the causes for this action. Our position is not that of a protestor against the Executive Committee nor of an applicant for new favors or for the renewal of old ones. But we object to misrepresentations which have been calculated to prejudice the paper in the minds of persons not familiar with all the facts. We print Bro. Adams' letter because it presents a very important and interesting point in a very clear way; but because it appears in the columns of the RURAL it must not be construed that the editor of the RURAL appears as a critic of the Executive Committee or as objecting formally or in any other way against its action.—[ED. RURAL PRESS.]

HAVE THE EXECUTIVE COMMITTEE EXCEEDED THEIR AUTHORITY?

TO THE EDITOR:—The recent action of the Executive Committee of the California State Grange in selecting a paper other than the RURAL PRESS as the official organ of the Order has led your correspondent to examine the proceedings had by the State Grange, and see if they really possess the power to do so.

The proceedings of the State Grange of 1892 show that the then W. M. in his address said the Grange was without an official organ, and urged the immediate action of the State Grange in regard to it.

This portion of the Master's address was referred to the Executive Committee, who reported as follows:

W. M., Officers and Members of the State Grange of Cal.:—Your Executive Committee, to whom was referred that part of the Master's report relating to "official organ," beg leave to report that they have considered the same, and recommend that the entire matter be referred to this State Grange for immediate action.

While your Executive Committee will do their best to properly transact the business of the Order when this body is not in session, we insist that, this body being now convened and this matter having been held in abeyance for this occasion, it should be considered and disposed of by the same.

Signed, B. F. Walton and Geo. P. Loucks, Executive Committee.

Bro. Amos Adams moved that the Grange be declared open and that Mr. Alfred Holman, general manager of the Dewey Publishing Co. and the RURAL PRESS, be requested to come before the Grange and state what he is willing to do as regards the publication of the official organ. Motion carried.

Mr. Holman was introduced to the Grange

(Continued on page 218.)



## THE HOME CIRCLE.

## The World Would be Better for It.

If men cared less for wealth and fame,  
And less for battle fields and glory,  
If writ in human hearts a name  
Seemed better than in song or story;  
If men, instead of nursing pride,  
Would learn to hate it and abhor it,  
If more relied  
On love to guide,  
The world would be the better for it.

If men dealt less in stocks and lands,  
And more in bonds and deeds fraternal;  
If love's work and more willing hands  
To link this world with the supernal;  
If men stored up Love's oil and wine  
And on bruised human hearts would pour  
it;

If "yours" and "mine"  
Would once combine,  
The world would be the better for it.

If more would act the play of Life,  
And fewer spoil it in rehearsal;  
If Bigotry would sheath its knife  
Till good became more universal;  
If Custom, gray with ages grown,  
Had fewer blind men to adore it;  
If Talent shone  
In Truth alone,  
The world would be the better for it.

If men were wise in little things,  
Affecting less in all their dealings;  
If hearts had fewer rusted strings  
To isolate their kindred feelings;  
If men, when Wrong beats down the Right,  
Would strike together to restore it;  
If Right made Might  
In every fight,  
The world would be the better for it.

—M. H. Cobb.

## Baby.

There came into port the other day,  
The queerest little craft,  
Without a stitch of rigging on;  
I looked and looked and laughed.

It seemed so strange that she should come,  
Across the stormy water,  
And anchor there, right in my room,  
My daughter, oh, my daughter!

—George W. Cable.

## Apartments to Let.

"Apartments to let!" read Miss Pamela Wilde.

She had paused before the neatest, and trimmest, and coziest of little suburban houses. It was just two stories high; it was painted snowy white; it had bright green shutters; it boasted a verandah, and a huge old shady porch.

Moreover, there was a garden—a delicious diminutive patch of budding blooms.

"It's the very identical place for me!" she decided enthusiastically, standing like a small grey statue of approval in the sweet spring sunshine. "That is, if the rent isn't too high. But I'm very much afraid it is."

Nerving herself to equably endure disappointment, she pushed open the gate and went up the path.

Miss Pamela was called an old maid. She had just climbed the hedge of thirty; if she was, she was the very nicest old maid that ever existed.

She had a plump little figure, a pair of blue sunshiny eyes, rosy lips, soft brown hair, and cheeks as pink as peaches.

How inviting everything looked, to be sure! The windows were open, and some birds hanging directly within, in their shining cages, were shrieking in thrill exultation; a placid and prosperous-looking cat reposed upon the doorstep; the treading of those stainless steps with ditsy feet seemed desecration.

Miss Wilde rang the bell, a servant appeared in hurried response.

"My stars!" she exclaimed gleefully, and fell to surveying the lady before her, in an ecstasy of frank admiration. "You have rooms to let?" queried Miss Wilde, slightly disconcerted.

The girl apparently considered an immediate answer superfluous. She could not have been a bad-natured girl, for her face was constantly deluged in grins of the most dazzling description; but she was decidedly a peculiar girl.

"No," she declared slowly, after she had taken a minute mental memorandum of the stranger's simple but stylish costume. "No, I hain't got no rooms to rent, but my missus, she has."

"Can I see your mistress?" demanded Pamela with some impatience.

"No," blinking obliquely at her visitor's bonnet, "You can't!"

"Why?"

"Cos she ain't at home jest now. Did ye make it yerself?" with an upward motion of a grimy forefinger.

"Yes. Now will you let me see the rooms that you are to let?"

"Course, come in! Would ye mind walkin' upstairs afore me? I want to see how you've got yer polynase hung. I never kin git mine to hang eggsackly to."

Miss Pamela laughed, and mounted to the floor above. The rooms were delightful. There was a parlor and a bedroom, both furnished simply but tastefully.

There were soft-hued carpets, and curtains of delicate-tinted cretonne; there were wicker-chairs, all tied with bright ribbon; there was a walnut desk, a toilet-table smoothed in pink silesia and dotted muslin, and a great tall lamp, with a globe of rosy transparency.

"What is the rent?" asked Miss Wilde nervously.

"I—I don't remember, added the girl, smiling harder than ever; "you see, I'm absent-minded—I'm awful absent-minded. I'm that absent-minded, missus got me cheaper on account of it. Let me see, though. If anyone—called—about the rooms—I was to say to em—"

She broke off abruptly, and looked up at Miss Wilde, grinning quite ferociously.

"What was that I was to say to 'em?" she demanded serenely.

"I'm sure if you don't know, I don't," said Miss Pamela helplessly.

"Oh yes," exclaimed the girl, with a sudden gleam of recollection; "the door—it's the door."

She ran to the desk, pulled open a drawer, and took therefrom a sheet of paper, which she brought back in triumph. It was a statement of the terms, written by the landlady, also the stipulations—good reference and no children.

Miss Wilde's brow cleared. The terms were low—decidedly low.

"I'll take 'em," she declared promptly.

"Missus left that there paper for me to show to folkses," explained the girl; "I'm that there absent-minded, ye know."

"You'll not forget to tell her I've engaged them?" said Pamela severely, "I must take possession the day after to-morrow, and I cannot possibly come out to see your mistress to-morrow. Give me a pencil and some paper and I'll leave a note for your mistress, which you can give her when she returns. Will you?"

"There!" when she had written out her acceptance of the terms named, and her unexceptionable references—"there! Now don't forget to give it to her."

"My stars, no!" nodding and smiling confidently. "Say! sech long gloves as them the fashion—eh?"

She stood and started after Miss Wilde as that lady walked briskly down the path.

"Now, if I only could get my dress to look like her'n? What's this paper? Oh, yes—I'm to give it to missus! Well, I'll put it safe away for fear o' losin' it."

And she stowed it carefully away in the slimmest, and narrowest, and most inaccessible drawer in the walnut desk, and forthwith forgot all about it.

Half an hour later, her mistress returned.

"Any one been here, Susanna?"

"No," with a cheerful grin—"not a soul!"

"Now, Susanna, you know how absent-minded you are. Try and remember."

"Lemme see!" ruminated Susanna, looking quite thoughtful. "No—honor bright," with a more cheerful grin than before—"not a solitary soul!"

"Well," said Mrs. Tobey, taking off her bonnet, "run over to the meat-market, and get a pound and a half of steak and two heads of lettuce. Make haste!"

Susanna's flapping sunbonnet had barely vanished round the corner,

when there came a resolute ring at the bell.

Mrs. Tobey opened the door. A tall gentleman, clad in a light summer suit and straw hat, stood on the threshold.

He was a rather elderly gentleman, but he had none of the mildness common to age. He impressed Mrs. Tobey as being rather fierce, whether because of his aquiline nose, or gold-rimmed eye-glasses, or military mustache, she could not have told.

"You have rooms to rent, madam?" he inquired, lifting his hat politely.

"Yes, sir," said Mrs. Tobey, losing her awe immediately when he spoke.

"May I be allowed to see them?"

"Certainly, sir. This way."

"They'll do. With board, of course. Terms?"—quite reasonable. In advance?—precisely. References?—my card, madam."

"Henri Von Bergon," read Mrs. Tobey, from the piece of cardboard presented. "Not the great artist?"

Mr. Von Bergon smiled.

"An artist," he replied. "The adjective is due to madam's kindness."

"Oh, dear me!" said madam, all of a mutter, "are you sure the rooms are nice enough?"

"There is good light. There is seclusion. They are admirable. I shall take possession the day after to-morrow. Good-morning."

And exit Mr. Von Bergon.

Mrs. Tobey went down stairs and took off the pasteboard sign.

"Thank goodness, that's settled!" she declared fervently.

Thursday came—the brightest, balmy, sunshiniest of mornings. The house had been scoured, and scrubbed, and polished to a marvelous degree of cleanliness. The windows glistened like silver, the bell-handle was a knob of gold, the paints were positively speckless, the very flowers in the trim Dutch garden beds looked as though they had had their rosy faces newly washed.

About ten o'clock an express wagon stopped at the gate.

"Mr. Von Bergon's things," explained the man, and forthwith began depositing them on the garden-path—trunks, easels, easy-chairs, boxes of books, models, paint-boxes, and canvases—all of which Mrs. Tobey and Susanna were surveying reverently, when a second express drew up in the spot just vacated by the first.

"New lodger's traps!" he announced gruffly.

"Lord alive, Susanna!" gasped Mrs. Tobey, "if he isn't married!"

"Where's the harm in that same, ma'ma?" grinned Susanna.

"I am sure I understood him to be a single man. Though not that he ever said as much," she added conscientiously.

"These things don't look as if they b'longed to a man, sure!" said Susanna.

And they didn't. They were all on the garden-path now, jumbled in with the first load, and the express had driven away—a trunk, a wicker-work basket, a roll of music, a bundle of novels, a package of crewels and grey silks for "crazy work," and a bonnet-box.

"Here comes the gentleman," said Mrs. Tobey, as Mr. Von Bergon alighted from a fly at the gate.

"And here comes the lady!" groaned Susanna, with a fearful awakening of her torpid memory. "Oh, laud's sakes, how absent-minded I be!"

And sure enough at this very moment Miss Wilde came walking up the garden-path, almost side by side with Mr. Von Bergon.

"Good-morning!" she said, smiling.

"Mrs. Tobey, I presume. I'm your new tenant."

She was looking quite youthful and pretty this morning in her gown of soft pearl-colored lawn, with the sun-hat to match, all trimmed with pink ribbons.

"You're welcome," said Mrs. Tobey.

"Mr. Von Bergon did not say he was married—"

"What! what's this?" roared Mr. Von Bergon. "Married, ma'am? Who says I'm married, ma'am?"

"Isn't this lady your wife?" faltered Mrs. Tobey.

"No!" shrieked Miss Wilde.

"No!" thundered the artist.

"I am the new tenant," declared Miss Wilde. "Is it possible your servant did not give you the note I left for you, the day before yesterday, engaging the rooms?"

"No," gasped the landlady faintly. "She's that absent-minded, Susanna is."

And Mrs. Tobey fled in cowardly fashion.

"Let 'em fight it out!" she said, in the intervals of shaking the breath out of Susanna.

Left alone, the new tenants surveyed each other in antagonistic silence.

"Well, I guess I'd better be moving my things into the house," announced Miss Wilde resolutely.

"I guess not," retorted Mr. Von Bergon wrathfully, "the rooms are mine."

"I am sure I rented the first," declared Miss Wilde, trying very hard to keep back the tears of disappointment slowly rising. I am very sure I did. Mr.—Mr.—"

"Von Bergon," stiffly.

"Not—but now that I look at you I do believe it is—Henri Von Bergon! Why, I've got your photograph in my dear papa's album."

Down she went on her knees before her trunk, very much flushed and excited.

"Why, Miss—Miss—" he stammered.

"Wilde," she said. "Pamela Wilde."

"Not Andrew Wilde's daughter?"

"Yes," she avowed. "Look, here's your picture! Papa always told me it was that of his dearest friend."

"And, bless my soul if I haven't got yours some where about me! Wait till I open this satchel. There! your father sent it to me several years ago. You don't look a day older."

"Oh my!" blushing; "but I am. Papa is dead; you know, and I am teaching school for a living. This being vacation, I came out here—"

"And I tried to turn you out!" roared Von Bergon. "Heaven's alive! Andrew's daughter!"

"And I was so rude to papa's friend," said Pamela remorsefully; "I'll go right back to the city."

"You'll do no such thing. I'll go back. I'm a brute. I ought to be ashamed of myself."

"Oh, don't say that," remonstrated Pamela.

"See here," suggested the artist, coming up and taking both Miss Wilde's little grey hands in his; "suppose we both stay?"

"What?" gasped Pamela.

"The carriage is over there on the road yet. Let us drive back to the city and get married. I'm in love with you already. Say yes."

"Oh," said Pamela, "I couldn't."

"Why not?"

"I hardly know you at all."

"But your father knew me."

"That's so," said Pamela, brightening.

"Come, then."

And they went.

Mrs. Tobey and Susanna moved in the accumulation on the garden-path; and if those rooms weren't cozy and delightful, never rooms were before.

One day Mrs. Von Bergon, rummaging in the desk, found the note she had

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•DR•

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written to her landlady. She held it up for inspection.

"There is proof. I engaged the room first—I was right."

Her husband paused, with brush held suspended above her rosy face upon his canvas.

"You always are, my love," he admitted in meek adoration.

And Mrs. Von Bergon went straight downstairs, and hung Susanna's polonaise "eggsackly so."

"Susanna," she said solemnly, to that grinning and astonished damsel, "always be absent-minded. If there is anything laudable, anything conducing to supreme happiness, it is—absent-mindedness."

### Gems of Thought.

Though we seem grieved at the shortness of life in general, we are wishing every period of it at an end: the minor longs to be at age; then to be a man of business; then to make up an estate; then to arrive at honors; then to retire.—Addison.

People are always talking about originality; but what do they mean? As soon as we are born the world begins to work upon us; and this goes on to the end. And, after all, what can we call our own, except energy, strength and will? If I could give an account of all that I owe to great predecessors and contemporaries there would be but a small balance in my favor.—Goethe.

The great end of prudence is to give cheerfulness to those hours which splendor cannot glid and acclamation cannot exhilarate, those soft intervals of unbended amusement, in which a man shrinks to his natural dimensions, and throws aside the ornaments or disguises which he feels in privacy to be useless encumbrances, and to lose all effect when they become familiar.—Dr. S. Johnson.

Many of our young men of speculation, instead of exploring general prejudices, employ their sagacity to discover the latent wisdom which prevails in them. If they find what they seek (and they seldom fail) they think it more wise to continue the prejudice, with the reason involved, than to cast away the coat of prejudice and to leave nothing but the naked reason; because prejudice, with its reason, has a motive to give action to that reason, and an affection which will give it permanence. Prejudice is of ready application in the emergency; it previously engages the mind in a steady course of wisdom and virtue, and does not leave the man hesitating in the moment of decision, sceptical, puzzled and unresolved. Prejudice renders a man's virtue his habit, and not a series of unconnected acts. Through just prejudice his duty becomes a part of his nature.—Burke.

The talent of turning men into ridicule, and exposing to laughter those one converses with, is the qualification of little ungenerous tempers. A young man with this cast of mind cuts himself off from all manner of improvement. Every one has his flaws and weakness; nay, the greatest blemishes are often found in the most shining characters; but what an absurd thing it is to pass over all the valuable parts of a man, and fix our attention on his infirmities; to observe his imperfections more than his virtues! and to make use of him for the sport of others, rather than for our own improvement! We therefore very often find that persons the most accomplished in ridicule are those that are very shrewd at hitting a blot, without exerting anything masterly in themselves.—Addison.

A certain old Scotch lady was once protesting against the resignation of her pastor. The worthy man tasted sweetness in her words, but, wishing modestly to comfort her in the thought that all was not lost in his departure, bid her not to worry,—"You'll get a better man after I'm gone." But how was the fine edge of her compliment taken off by remonstrating reply: "Na, na! We've had four pastors already, and every one's been worse than the rest!"—Mid-Continent.

### The Dead Babe.

Last night, as my dear babe lay dead,  
In agony I knelt and said:  
"O God! what have I done  
Or in what wise offended thee,  
That thou should'st take away from me  
My little son?"

Upon the thousand useless lives—  
Upon the guilt that vaunting thrives,  
Thy wrath were better spent!  
Why should'st thou take my little son?  
Why should'st thou vent thy wrath upon  
This innocent?

Last night, as my dear babe lay dead,  
Before mine eyes the vision spread  
Of things that might have been—  
Licentious riot, cruel strife,  
Forgotten prayers, a wasted life,  
Dark red with sin!

Then, with soft music in the air,  
I saw another vision there—  
A Shepherd, in whose keep  
A little lamb—my little child—  
Of worldly wisdom undefiled,  
Lay fast asleep!

Last night, as my dear babe lay dead,  
In those two messages I read  
A wisdom manifest;  
And though my arms be childless now,  
I am content—to Him I bow  
Who knoweth best.

—Eugene Field.

### Fashion Notes.

Skirts are generally untrimmed. In all cases they fit closely over the hips and extend to great width at the hem.

Boat-shaped hats are here again, but they are transformed by a frill of lace, which is wired and made to extend over the brim, and masses of flowers are arranged just above the ears.

White turnover cuffs and collars, sometimes with chemisettes as well, are very fashionable. The daintiest are of white embroidered mull, trimmed with a narrow edge and *entredoux* of deep yellow lace.

A small "Don't" for the home dress-maker is not to stitch the waist seams with common silk; good cotton is better; strong machine silk is, however, easy to get, and ought to be used. The other silk may be used in all other parts of the dress.

Shirt waists continue to multiply in variety, and besides the regulation Chambery waist with the stiff turnover collar, there are dainty ones of dotted Swiss, striped with a color and made with soft-draped band at the neck, which can be replaced by one of satin ribbon.

In the spring models the sleeves, or at least the tops of the sleeves, are larger and more elaborate than ever. They are often composed of lace ruffles, with loops and ends of ribbon between them; or the drapery is sometimes trimmed with accordion-plaited frills of mousseline de soie. They stand well out, about even with the shoulders, and often form the most elaborate feature of the costume.

Fichus are in style again, and this arrangement of the trimming is seen on many of the new waists. An exquisite silk in rose and gray is very daintily and simply trimmed. Over the shoulders is a fichu of gray Liberty mousseline de soie, edged all about with an accordion-plaited frill of the same. The fichu is fastened on the bust with the fashionable bow of pink ribbon; an end of the ribbon then passes under each arm with the fichu and fastens with another bow in the back. The choker is of pink ribbon.

### Remedy for Earache.

"I am afraid I have greatly interfered with my own practice," said a celebrated aurist, "by giving the following advice to many of my friends: At the first symptom of earache let the patient lie on the bed with the painful ear uppermost. Fold a thick towel and tuck it around the neck, then with a teaspoon fill the ear with warm water, continue doing this for fifteen or twenty minutes; the water will fill the ear orifice, and flow over on the towel. Afterward turn over the head, let the water run out, and plug the ear with warm glycerine and cotton. This may be done every hour until relief is obtained. It is an almost invariable cure, and has saved many cases of acute inflammation. The water should be quite warm, but not too hot.

### Popular Science.

It is computed that thirty-seven people die and seventy are born every minute.

Experience in electrical welding shows that the metal is strengthened at the point of welding.

The jungle fowl of Australia builds a nest that is about twenty feet in diameter and fifteen feet high.

It has been shown that the color yellow, both vegetable and animal, is more permanent than any other hue.

Over forty million trees have been planted in Switzerland in seven years in the effort to "reforest" the country.

Prof. Virchow, the eminent German pathologist, has affirmed his belief that no trace of "the missing link" between man and the lower animals has been discovered, either in the physical structure of modern savages or in the human skulls which are believed to be the most ancient.

Jupiter takes eleven years and ten months in making his journey around the sun. Thus, our earth travels nearly twelve times around the sun while Jupiter goes around only once. This is easily explained, since Jupiter is five times farther from the sun than our earth, and therefore has a greater distance to travel. For the same reason, Jupiter receives much less light and heat from the sun than we do. In each second of time, Jupiter's giant bulk moves eight miles—a rate which is about five hundred times faster than the swiftest express train.

### The Rival Mothers.

This story is beyond doubt original to Japan in its present form, but it bears a remarkable resemblance to another celebrated judgment given more than 2,000 years ago on the other side of the world.

About a century and a half ago a woman, who was a servant in the house of a daimyo, had a little girl born to her. But it was inconvenient for her to have the child with her in the daimyo's mansion, so she put the little one out to nurse with a woman in the neighboring village. The child grew to be very intelligent, and the foster-mother, who was a heartless woman, thought she saw an opportunity to earn money through the girl's services, and determined to keep her. Accordingly, when the mother's term of services expired and she came to get back her child, the foster-mother treated her claim as false, said the child was her own, and utterly refused to give her up.

So at last they came before Oka, the town magistrate of Yedo, who, after some thought, hit upon a novel plan of deciding. He placed the child between the two mothers, had each one take an arm of the child, and then ordered them to pull! He could then tell, he said, which one deserved to have the child. The foster-mother, thinking only of winning, pulled with all her might, but the true mother, full of affection for her child, couldn't bear to inflict on it such brutal pain, and she let go as soon as she felt the other woman pulling. "The child is mine!" exclaimed the foster-mother, triumphantly. "Not so!" said Oka, sternly; "you are a pretender; this other is the true mother."

Then the false mother confessed her deception, and begged for pardon. The people, when they heard of the judgment, were full of admiration for the penetration and sagacity of their magistrate.—Harper's Young People.

Eggs covered when frying will cook much more evenly.

### DOMESTIC ECONOMY

#### Domestic Hints.

**CHEESE SANDWICHES.**—Cut up fine any bits of cheese that cannot well be used any other way, add a little cream or melted butter and let it heat slowly till the cheese is melted and the whole becomes a paste. If liked, season with salt, cayenne pepper and mustard. Spread this mixture on thin slices of bread and put together.

**BAKING POWDER BISCUIT.**—One quart of flour, three and one-half teaspoonsful of baking powder, half a teaspoonful of salt, one tablespoonful of butter and two cups of sweet milk. Sift the baking powder and salt with the flour, cut the butter in lightly with a knife, then wet with the milk stiff enough to roll, but not to knead. Cut with biscuit cutter and bake fifteen minutes in a hot oven. If water is used instead of milk, double the quantity of butter.

**MINUTE PUDDING.**—One pint of flour, a teaspoonful each of soda and salt, a scant quart of milk. Mix the soda and salt with the flour, turn the milk into a buttered spider, and the instant it boils up add all the flour at once. Toss it up quickly till the flour is well mixed, turn it into a buttered bowl, cover close, and let it stand a few minutes to shape. Turn out on a hot platter, and serve at once with wine or lemon sauce. This is an old-fashioned receipt, and has been used for many years with great success.

**CHICKEN BROTH.**—If the weather is warm, use but half a chicken to make broth for one person. If it is cool, take a whole one, as the broth will keep several days. Pull off the skin (as it contains a good deal of oil), disjoint and cut the meat into small pieces. Remove all the fat. Break or pound the bones. Allow two quarts of cold water to a chicken. Heat slowly and simmer till the meat is tender. Skim carefully. When the broth has simmered an hour, add a little chopped onion if the flavor is liked. Strain, and, when cold, remove the fat. Season with salt and pepper. Put it over the fire, and stir well until hot. Let it boil five minutes. If rice and parsley are to be added, add a large spoonful of rice and simmer slowly one hour; add the minced parsley five minutes before it is served.

#### Hints to Housekeepers.

If you heat your knife you can cut hot bread as smoothly as cold.

A little flour dredged over the top of a cake will keep the icing from running.

Clear, black coffee, diluted with water and containing a little ammonia, will cleanse and restore black clothes.

The white of an egg, with a little sugar and water, is good for a child with an irritable stomach.

A large slice of raw potato in the fat when frying doughnuts will prevent the black specks from appearing on their surface.

A little powdered borax in baby's bath water prevents the little one's skin from chafing, and he is not liable to "break out with the heat."

The best way to produce the beautiful black so much admired in certain articles of furniture, etc., is to moisten the surface with dilute sulphuric acid and then heat until the desired stain is produced. The rationale is, of course, that the heat drives off the water and so concentrates the acid that it carbonizes the tissue.

Highest of all in Leavening Power.—Latest U. S. Gov't Report

**Royal Baking Powder**  
ABSOLUTELY PURE



## From Bro. Amos Adams.

(Continued from page 215.)

and made a verbal proposition, which was thoroughly discussed by different members of the Order.

The W. M. requested Mr. Holman to submit his proposition in writing, which he promised to do.

At a subsequent meeting of the Grange Mr. Holman submitted a written report, stating the terms and conditions that would control him in the publication of the organ.

Bro. J. D. Huffman moved to accept the proposition, providing the price of the paper be fixed at \$2 per annum for single subscription to Patrons and \$1.50 to clubs of ten or more.

S. T. Coulter moved to amend Bro. Huffman's motion by striking out the proviso regarding prices.

Mr. Johnston, P. M., moved to accept the proposition offered by Mr. Holman.

B. F. Walton, of the Executive Committee, offered a substitute for all previous motions to the effect that the proposition, as offered by Mr. Holman, be accepted. Carried.

At the meeting of the State Grange, October, 1893, the Executive Committee made the following report to the State Grange:

The proposition made by Alfred Holman of the PACIFIC RURAL PRESS, and accepted by this State Grange at its annual session in the city of San Jose, took the ever-recurring matter of an official organ out of the hands of the Executive Committee, and the faithful manner in which that proposition has been carried out has been a great satisfaction not alone to your committee, but to all progressive members of the order. The editorial columns of the RURAL PRESS for the past year have convinced us that all that is required to make it one of the leading, if not the best, Grange paper in the United States is for the membership to do their part. If the sixteen officers of this State Grange will make as much of an effort to supply its columns with current Grange literature as a few have done, and the membership throughout the State will provide each locality with a live, progressive Grange correspondent who will work through its columns to build up the order on this coast, and disseminate among the masses correct ideas in regard to all important matters touching our interests, we have set in motion all the machinery that is needed for a very superior Grange organ. Signed: B. F. Walton, Cyrus Jones and Geo. P. Loucks, Executive Committee.

At the same session (1893) that portion of the Master's address which referred to the official organ was referred to the Committee on Good of the Order. The committee reported as follows:

Your committee, after a full and careful consideration, believe that, owing to the difficulties in the establishment of an independent organ in the way of expense, are unable to discover any means by which that desirable object can at present be accomplished.

We therefore recommend that the present arrangement with the RURAL PRESS be continued, with the exception that more space be allotted for Grange news, and that Grange correspondence other than that received from professional writers be given a place also in its columns, with a view that the order throughout the State may receive the same benefits arising through the co-operation and progress of the various Granges. Signed by the committee: Sisters E. Z. Roach, A. J. Allison, D. A. Moran and Bros. M. T. Noyes and George Ohleyer.

Worthy Master Roach, in his address at the opening of the State Grange in October, 1894, after stating "that the present arrangement is of little value to the order or the RURAL PRESS," urged that "It is for this body in its sovereign capacity to say what shall be done at this time; but don't leave it with the Executive Committee. Their hands are already too full."

A careful search of the proceedings of the last State Grange does not show that any action was taken in the matter, nor do they show that the question of selecting a Grange organ was referred to the Executive Committee. This being the case, by what authority does the Executive Committee attempt to nullify the acts of the State Grange?

To the average layman this is an important question. If the committee can usurp power not delegated to them, then there is nothing to prevent them, now that the State Grange has selected Merced as the place for holding the next State Grange, from changing the place of meeting to Chico, Milpitas, or any other places, or to nullify any other positive act of the State Grange.

It is evident that, inasmuch as the State Grange omitted to take any action on the recommendation of W. M. Roach, only to negatively comply with his request "not to refer it to the

Executive Committee," leaves but one conclusion, to wit: that further action on the subject was not desirable, at least until the next meeting of the State Grange in October, 1895.

AMOS ADAMS.

San Jose, March 30, 1895.

## North Butte Grange Inspection.

TO THE EDITOR:—The inspector of this district, Brother E. C. Shoemaker, performed the service of inspection for North Butte Grange on Saturday last in a highly satisfactory manner, both to himself and to the members of the grange. The home of this grange is at the town of Live Oak, situated near the northeast corner of Sutter county, on the California and Oregon railroad. It is a trading point for a large community of small farmers of northern Sutter and southern Butte counties. In the vicinity are located some of the most extensive orchards and nurseries in the Sacramento valley. The soil is a dark loam, as was well attested by the plows at work along the way; and, judging from the fresh and rank appearance of the grain, it is unexcelled in fertility. Evidences of excessive rainfall were still visible, although being rapidly obliterated by the plows and growing grain.

The writer is under obligations to the inspector for transportation to the scene of his labors, through this most excellent portion of Sutter county, a distance of twelve to fourteen miles. In due time the spacious hall began to fill with smiling grangers, and the ante-room with mysterious looking baskets and boxes. Besides the local grange, there were visitors from South Sutter and Yuba City Granges.

Worthy Master John W. Hedger called the meeting to order and presided with the ability of a veteran. After transacting the routine work a recess was ordered, during which a general free and cordial reception was tendered to visitors from abroad. Tables were spread in double rows the entire length of the hall, and at a signal from the worthy master the assemblage fell in line around the tables and for an hour re-enforced the inner man, amid universal expressions of gratitude for a fine day, a magnificent feast, a huge appetite, and to the good sisters who provided so lavishly for the comfort and enjoyment of the occasion. The room being again put in order, instructions were given in the degrees by the local officers in a very creditable manner and which elicited unstinted praise from the distinguished visitor, Brother Shoemaker. These exercises were interspersed with vocal and instrumental music, recitations and impromptu remarks, all of a high order of merit and which were received with applause and other manifestations of approval.

These after-dinner exercises put the large audience in excellent humor to listen to a short but excellent address by Bro. Shoemaker on Grange topics, which I regret to be unable to repeat here. The writer, in response, also had something to say about the objects and accomplishments of the order, continuing until his voice became choked by vociferous and prolonged applause. On taking his seat he learned that the scheme had been instigated by the inspector, who thus sought to conceal his presence within a circle of Live Oak beauties, all pretending to be inspecting the books of the Grange. My own better-half, being besieged with the question, "Is he married?" was seen to reply with a jealous frown and nervous jerk, "I don't know."

Such was inspection day at Live Oak, and the thanks (standing) to the worthy brother for his pleasant visit, the hope was universally expressed that "inspection day" may be repeated soon and often. It was really a grand success in every way, and is a day long to be remembered by the visited and visitors.

One of the speakers dwelt somewhat at length on these social advantages enjoyed by the isolated residents of the country which only the Grange rendered possible. All the world, said

he, was combining in cities and centers of population, socially and commercially, to which the dwellers of the country are no match in an unorganized condition. The Grange was instituted to meet this want, this universal demand and necessity for co-operation, to meet the combinations of the times. Much, said he, had been accomplished, but constant vigilance was necessary to keep abreast of the times and to wield the influence for good that our numbers and wealth entitle us to.

The Grange closed amidst general rejoicing, and the final separation was lingeringly expressed in good wishes and fervent hand-shaking.

GEORGE OHLEYER.

Yuba City, April 2, 1895.

## Now Is the Time for New Blood and New Leadership.

STOCKTON, March 30, 1895.

TO THE EDITOR:—Under the head of "A Visit to Stockton Grange," which article was read there Saturday, the editor of the RURAL PRESS says that the Grange needs new blood and practical leadership. None can gainsay this. With restful ease, we dwell on the good the Grange has done, forgetful that if we do not keep in the vanguard with new work, we will be dropped to the rear of Orders, for ours has no mortuary or sick benefit to hold its membership. Stockton Grange tried and abandoned the mortuary fund. The dollar each paid, in a family of five or six, made a death indeed mournful. Low wheat and high freight has decimated the Grange, which has wisely adopted Bro. Lubin's plan, as has one State political party, to help out the losing farmer. Many of our best officers have had to turn closely to personal business, and most members have a hand-to-hand conflict to meet taxes and insurance. Now is the time to bring out new leaders, new energies to meet depressing but not hopeless exigencies.

We should have had an active member helping to get the San Joaquin Valley Railroad through. Subordinate Granges should, during legislative sessions, keep posted on bills to intelligently act with the "legislative committee." We should read up more of the questions of the hour, of our work-day lives, how to raise, prune, sell and buy more from each other. Members are often—not always—tired. I know a tired body means tired nerves, and tired nerves mean a tired brain. Rest comes of helpful articles read not in proving ourselves right on a point till

we fill our members with pins and needles and cannot reach the cloak of humility to enwrap ourselves on the way to the final judge.

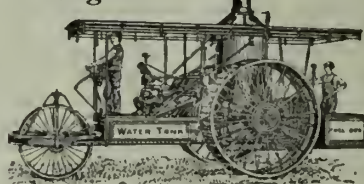
I like and use the "trade card." It is fair if all members would patronize the arranged places. Others see injustice in it.

"Inspection" is yielding fruit. Under Bro. Greer, Waterloo Grange reorganized, elected fine officers and installed Saturday evening. Lodi, two weeks ago, initiated four young men. Our county lecturer, Sister Lou Overhiser, is an able factor in this work of regeneration. We need the zeal born of youthful energy. Let us bring our young people more to the front with entertainments, the public for audience and we for helpers, joining in the dance that ends an evening of worthy effort. Young people don't want to see old ones pose. They want to take a hand in the activities of life. If we have a principle to argue, let them take up the cudgels and the Grange vote a decision. The able editorials, "From an Independent Standpoint," help young and old to keep up with leading questions of the day. The Grange has gained much, not the least of which is the Pure Food bill; and though it has lost the Insurance and Sanitary Board bills, suppressing disreputable quarters in sanitary districts, it has new incentives to struggle and unite on and plenty of youthful energy to call to the front another year. A. A.

## The Wheels of Progress.

A good deal has been said, one way and another, within the last few years about the wheels of progress being clogged. Various reasons are given for this condition, over-supply, concentration of wealth, lack of confidence, demonetization of silver, etc., nearly every man having an opinion of the cause, as well as a plan of his own for the solution of the entire problem. Speaking of wheels, progress, etc., the Marion Cycle Company's '95 wheel, the "Halliday-Temple Scorchers," is entirely in it. There are no clogs on it and it is making the same rapid progress in public favor that it always makes over the roads and lanes of the country wherever it is used. You will get the handsome illustrated catalogue that tells all about it by sending to O. S. Potter, the Pacific coast agent, 48 Fremont street, San Francisco.

## Price's Traction Engine.



We have one of these engines that was used about one month last season and was taken back by us by reason of illness of purchaser. Engine is in perfect order, and in better working order than when first sent from the factory. A BARGAIN. Indicated power, 80-horse; Cylinders, 8x8; Wheels, 8 ft. high, 28 in. wide; weight, less than 10 tons. Price when new, \$4500.

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## NOTICE.

THE ANNUAL MEETING OF THE STOCKHOLDERS of the Grangers' Business Association, a corporation, for the election of a Board of Directors, and for the transaction of such other business as may properly come before it, will be held at No. 108 Davis street, San Francisco, at 10 o'clock A. M., WEDNESDAY, April 10th, 1895.

I. C. STEELE, President.

CHARLES WOOD, Secretary.

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SO PRONOUNCED

By the Physicians

SEVERE

COUGH

At Night

Spitting Blood

Given Over by the Doctors!

LIFE SAVED BY

AYER'S CHERRY PECTORAL

"Seven years ago, my wife had a severe attack of lung trouble which the physicians pronounced consumption. The cough was extremely distressing, especially at night, and was frequently attended with the spitting of blood. The doctors being unable to help her, I induced her to try Ayer's Cherry Pectoral, and was surprised at the great relief it gave. Before using one whole bottle, she was cured, so that now she is quite strong and healthy. That this medicine saved my wife's life, I have not the least doubt."—K. MORRIS, Memphis, Tenn.

Ayer's Cherry Pectoral

Received Highest Awards

AT THE WORLD'S FAIR



**Horticultural Society Meeting.**

The March meeting of the State Horticultural Society, held in this city at the usual place last Friday, was very poorly attended; and a good part of the proceedings was devoted to talk of ways and means for increasing interest among fruit-growers in the work of the society. In the present condition of the fruit interest growers cannot afford to make a journey to the city to attend the meetings; and yet it is of the greatest importance that the society be kept up. Something more than a year ago, the society held one of its stated meetings at San Jose and the attendance was large; and out of this meeting grew the State Fruit Exchange project. It was suggested at last week's meeting that the society try the plan of holding its monthly sessions at different fruit centers; and though the matter was discussed oppositely, nothing was done about it.

The central interest of last Friday's meeting was a little apart from fruit matters, being an address by Mr. J. B. Olcott, of Manchester, Connecticut, descriptive of his work in promoting the study of grasses and turf-making. Mr. Olcott has at his place at Manchester a garden in which many hundreds of turf grasses are being practically tested, with the idea of finding out the comparative merits of the different grasses. He collects turf from every region and is in the way of vastly increasing the stock of available knowledge on grass and turf questions. Mr. Olcott declares California to be an ideal place to carry on turf experimentation and hopes to interest somebody in the work here.

President Lelong brought up the question of representing the horticultural interests of California at the coming expositions at Atlanta, Georgia, and in the City of Mexico; and Messrs. Stabler, Holman and Fitzsimmons were named as a committee to confer with the State Board of Trade concerning the matter.

A general discussion as to fruit prospects brought out information from the leading districts. Judge Stabler said that everything in the Yuba City district was in fine condition, excepting only apricots. Of this crop there would be almost no crop at all. All other sorts were full and with every promise of an abundant yield. Senator Buck said that on the valley lands at Vacaville apricots were badly damaged, but that in the elevated orchards there would be a fairly good crop. There would, he declared, be enough for fresh shipment, but hardly any for drying. With the single exception of the Susehanna, peaches were all right. Mr. Erhorn said that some parts of Santa Clara county had been badly hit by frost; apricots would be a very light crop. The first crop of strawberries was completely gone. Mr. Sanderson, also of Santa Clara, confirmed Mr. Erhorn's report, adding that peaches were full of bloom and promised a fine yield. Mr. Deming, of Sacramento, had not been at home for some weeks, but from letters he judged that injury from frost had been limited to the earliest varieties of apricots and that in his county the loss would be very slight. Mr. Jones, of Placer, said that in his section there had been no suffering from frost.

At the next meeting the subjects of Thinning, Marketing and Transportation will be considered. The secretary was instructed to specially invite Messrs. J. N. Anderson, B. F. Walton and A. Weinstock to be present.

**How's This!**

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Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75c. per bottle. Sold by all Druggists. Testimonials free.

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You've heard of him.  
Perhaps you've seen him.  
Possibly you've dealt with him.  
And you're sorry for it now.  
Still you've learned something.  
You're never going to forget what it was that caught you.  
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In buying your harvesting machinery don't put too much confidence in an honest look.

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light-running steel binders and mowers not only have the honest look, but they have something better—reputation—character. This they have earned by long years of public service. There's stability in the very name "McCormick" and machines having that name can not be sold as cheaply as others, because they have other and more intrinsic value than "an honest look."

Seen a McCormick Catalogue?  
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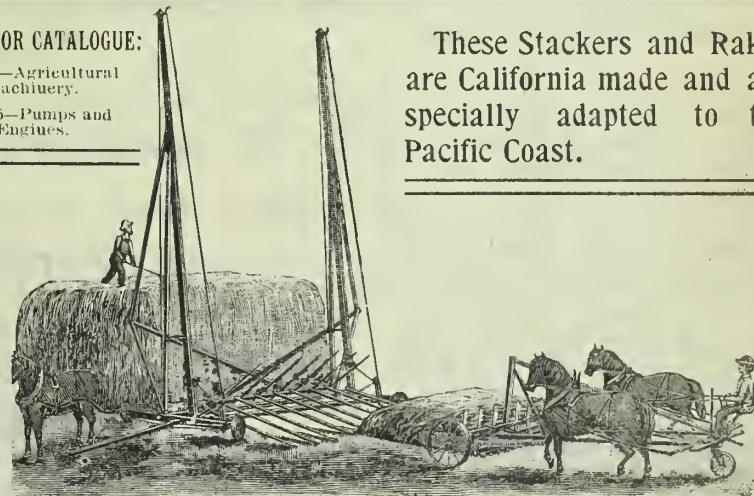
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**NOTICE.**—We have discontinued our Sole Agency for the "Eclipse" Stacker and "Acme" Rake, heretofore controlled by the Deere Implement Company, of San Francisco; and they will no longer represent us. Henceforth we will supply these Stackers and Rakes direct to the trade. We carry a large stock on hand; and all orders will receive prompt attention. Send your orders direct to us, or through your local dealer.

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## Markets for American Products.

The Agricultural Department at Washington expects to issue a bulletin on the world's markets for American products. The information for this publication has been acquired from the Consuls of the United States, through the efforts of Secretary Morton. Late in December, at his suggestion, a department circular letter was sent to these officers asking them to report with reference to the consumption in their districts of the products named: Animals, cereals, dairy products, meats, cotton, tobacco, fruits, liquors and seeds. The attention of Consuls was especially directed to the following inquiries:

Is there a considerable consumption of the products named?

Do consumers depend, and to what extent on importations for their supply?

How are the products sold and at what price?

Are the prices paid for American relatively higher or lower than those paid for similar products from other countries?

Are there criticisms of American products?

What defects are charged, if any?

Secretary Morton feels confident much good will result from the publication of the answers obtained, and says that many reports have already been received through the State Department from half the total number of Consuls. He contemplates issuing four bulletins of the character indicated each year.

## Natural Bridge in Oregon.

One of the chief of the west coast natural curiosities is the "Titan's Bridge," situated in Douglas county, Oregon, and about eighteen miles from Oakland. It is not on such a grand scale as the famous "Natural Bridge" of Virginia, but will, when its whereabouts become generally known, rank high among American oddities of nature. This Oregon natural bridge was discovered only a few years ago by a Californian of the name of Magee. The canyon spanned by its arch is 91½ feet wide at the base between side walls, and the arch itself only lacks 4½ feet of being an even 100 above the little stream that runs beneath. The rock stratum which spans the canyon and forms the bridge is 30 feet in thickness, exclusive of 3 or 4 feet of earth, which supports a few straggling trees. It has already become a great resort for Oregonian outers, and a large hotel on a plateau near the western approach of the bridge is among the near future probabilities.

100,000,000 Acres.

The United States Surveyor-General for California estimates the area of the State of California to be 100,395,000 acres, as follows:

|                                                          | Acres.      |
|----------------------------------------------------------|-------------|
| Agricultural and mineral lands surveyed to June 30, 1892 | 61,887,392  |
| Agricultural and mineral lands unsurveyed                | 26,211,501  |
| Private grants patented                                  | 8,383,375   |
| Private grants not settled                               | 311,650     |
| Indian military reservations                             | 318,631     |
| Lakes, islands, bays and navigable rivers                | 1,531,700   |
| Swamp and overflowed lands surveyed                      | 1,635,227   |
| Swamp and overflowed lands unsurveyed                    | 85,524      |
| Total                                                    | 100,395,000 |

ANIMALS are like the bright and fragrant flowers of plants—when their function is accomplished, they wither and perish. The business of the animal seems to be, not to live its own life, but to reproduce its own kind, and the term of life at its disposal is adjusted accurately to the special difficulties of this purpose. Death comes as soon as possible after the due number of successors has been produced, in order that each species may always be represented by a full tale of young and vigorous individuals. Natural selection acts like a contractor who has undertaken to keep a window box gay with fresh blossoms—each plant must be removed almost before its flowers fade.

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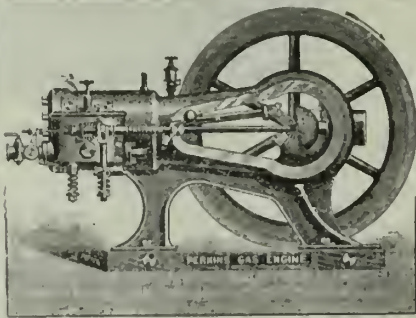
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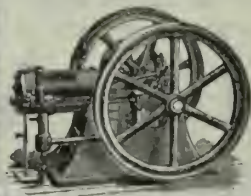
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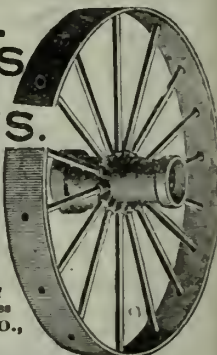
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S. F. MARKET REPORT.

**Market Review.**

**SAN FRANCISCO, April 3, 1895.**

**FLOUR**—We quote: Net cash prices for Family Extras, \$3 25@3 35 ¢ bbl; Bakers' Extras, \$3 15@3 25; Superfine, \$2 10@2 40 ¢ bbl.

**WHEAT**—The spot market is fairly active at steady prices. While there is no urgent demand on the part of exporters, they show disposition to buy available lots at current figures, and it looks as if shipping trade were likely to be of continuous character during the present month. Operators do not anticipate any boom in prices, though it is believed that bottom quotations have been reached, and that existing rates will be sustained, while the probabilities are considered favorable for improvement, trifling though it may be. Quotable at 85¢ ¢ ctl. for No. 1 shipping, with 6½¢ for choice. Milling parcels are rather steadily held at a range of 90¢@95¢ ¢ ctl.

**BARLEY**—The condition of the market is not satisfactory to holders. There is disposition to sell, but the wants of buyers are not large enough to give much animation to the situation. Crop prospects are promising, and farmers would rather realize than carry whatever reserves may be on hand. Values under existing circumstances are naturally easy. We quote: Feed, fair to good, 70¢@72½¢; choice, 73½¢@75¢; Brewing, 85¢@90¢ ¢ ctl.

**OATS**—Values are practically unchanged. There is good demand for both milling and choice feed descriptions, but all wants are promptly filled within the current range of quotations. With common qualities, the market is liberally stocked, and quotations for such offerings are weak and favorable to buyers. We quote: Milling, 107½¢@117½¢; Surprise, \$1 07½¢@1 17½¢; fancy feed, 1 02½¢@1 07½¢; good to choice, 95¢@1 ¢; fair to good, 90¢@95¢; poor to fair, 85¢@87½¢; Black, 1 10¢@1 17½¢; Red, 1 10¢@1 20¢; Gray, 95¢@1 ¢ ¢ ctl.

**CORN**—Dealers have lowered asking prices, with a view of bringing about more trade. We quote: Large Yellow, 95¢@1 15¢; small Yellow, 1 15¢@1 20¢; White, 1 10¢@1 20¢ ¢ ctl.

**RYE**—Quotable at 85¢@87½¢ ¢ ctl.

**BUCKWHEAT**—Quotable at 80¢@85¢ ¢ ctl.

**FEED**—Manhattan Horse Food (Red Ball Brand) in 100-lb casks, \$8; Manhattan Egg Food, 100-lb bags, \$11 50.

**GROUND BARLEY**—Quotable at \$17 to \$17 50 ¢ ton.

**HAY**—Prices have softened, as supplies are coming to hand with more freedom, making concessions necessary to effect ready sales. We quote as follows: Wheat, \$8 50¢@11 50¢; Wheat and Oat, \$8¢@11¢; Oat, \$8 50¢@10 50¢; Alfalfa, \$8¢@9¢; Barley, \$8¢@10¢; Clover, \$8¢@9¢; Compressed, \$8 50¢@11¢; Stock, 6¢@7 ¢ ton.

**STRAW**—Quotable at 70¢@80¢ ¢ bale.

**BEANS**—All kinds of Whites are steadily held, though trade is neither quick nor heavy: Bayos, 1 70¢@1 90¢; Butter, \$2 25¢@2 50¢ for small and \$2 25¢@2 50¢ for large; Pink, \$1 65¢@1 75¢; Red, \$1 60¢@1 85¢; Lima, \$1 60¢@1 65¢; Pigeon, \$2 75¢@2 90¢; Small White, \$2 75¢@3 00¢; Large White, \$2 60¢@2 80¢; Blackeye, \$3 25¢@3 50¢; Red Kidney, \$2 75¢@3 ¢; Horse, \$1 60¢@1 70 ¢ ctl.

**SEEDS**—Lower prices are asked for Mustard, but the fact does not stimulate trade. Alfalfa is in fair request, stocks being small. We quote: Mustard, Brown, \$1 25¢@1 75¢; Yellow, \$1 75¢@2 ¢; Rieste, \$1 05¢@1 75¢; Canary, 3¢@4¢; Hemp, 3¢@3½¢; Rape, 1½¢@2¼¢; Timothy, 5½¢@6½¢ ¢ lb; Alfalfa, ½¢@8¢ ¢ lb; Flax, \$2¢@2 50 ¢ ctl.

**POTATOES**—Receipts of new this morning were 55 sacks. Old stock is in free offering. New, 1¼¢@1½¢ ¢ lb; Early Rose, 40¢@50¢; River Reds, 30¢@35¢; Burhanks, 45¢@55¢; Oregon Burhanks, 60¢@81¢; Salinas Burhanks, 75¢@81¢; Sweets, \$1 25¢@2 50 ¢ ¢ ctl, as to quality.

**ONIONS**—Prices on the decline. Quotable at 10¢@90¢ ¢ ctl; cut, 25¢@40¢.

**VARIOUS**—Green Peas brought good prices this morning, receipts being 128 sacks. Asparagus was in heavy supply, footing up 1384 boxes. Arrivals of Rhubarb were 449 boxes. We quote: Asparagus, 50¢@1 ¢ doz; Asparagus, 75¢@1 25 ¢ box for the general run and \$1 50 ¢ doz for fancy; Rhubarb, 25¢@60¢ ¢ box; Green Peas, \$1 per sack for poor and 2¼¢@4 ¢ ¢ lb or good to choice; Green Peppers, 10¢@20¢ ¢ lb; Turnips, 50¢ ¢ ctl; Beets, 60¢@75 ¢ sack; Carrots, 30¢@50¢; Cabbage, 50¢@60¢ ¢ ctl; Garlic, ½¢@4¼¢ ¢ lb; Cauliflower, 30¢@40 ¢ doz; Marrow-at Squash, \$12¢@14 ¢ ton; Hubbard Squash, \$10¢@2 ¢ ton; Dried Peppers, 11¢@12¢ ¢ lb; Dried Okra, 15¢ ¢ lb.

**FRESH FRUIT**—We quote: Apples, 50¢@1 ¢, with \$1 25¢@1 50 for fancy.

**STRAWBERRIES**—Receipts light, with prices too high for quick sale. Quotable at 75¢@1 ¢ ¢ rawer.

**CITRUS FRUIT**—Oranges are cheaper, offerings being large. Mexican Limes are firm, being scarce. Consignments are expected by the Panama steamer due next Saturday. We quote as follows: California Navels, \$1 50¢@2 50¢; Seedlings, 75¢@1 25 ¢ box; Mexican Limes, \$7¢@8 ¢ box; Lemons, Sicily, \$3¢@4¢; California Lemons, \$1 50¢@2 for common and \$2 25¢@3 for good to choice.

**DRIED FRUIT**—In spite of damage by frost, dealers look for nearly an average crop, owing to be new acreage coming into bearing and the increased output of young trees.

Following are the prices furnished by the fruit exchange. The figures presented represent arload lots, small parcels occasionally selling at slightly lower rates:

Apricots—Fancy Moorpark, 8¢; choice, do, 7½¢; any, 7¢; choice, 6¢; standard, 5½¢; prime, 5¢.

Apples—Evaporated, 5½¢@6½¢; sun-dried, 4¢@5¢.

Peaches—Fancy, 7¢; choice, 6½¢; standard, 5¢; prime, 5½¢; peeled, in boxes, 12¢@13¢.

Pears—Fancy, halves, 5½¢; quarters, 4½¢; choice, 4¢; standard, 3½¢; prime, 3¢.

Plums—Pitted, 4¢@5¢; unpitted, 1½¢@2¢.

Prunes—Four sizes, 4½¢@4¾¢.

Nectarines—Fancy, 7¢; choice, 6½¢; standard, 5¢; prime, 5½¢.

Figs—White, choice, 4¢@5¢; black, choice, 2¢@2½¢.

Raisins—In sacks (50-lb. boxes selling at ¼¢ ¢ p. higher): 4-crown, loose, 4¢; 3-crown, 2½¢; 2-crown, 2¢; seedless Sultanias, 3¢; seedless Mustats, 2¢ ¢ lb; 3-crown London Layers, \$1 25 ¢ box in 20-lb. boxes; clusters, \$1 50¢; Dehesa clusters, \$2; Imperial clusters, \$3; 4-crown, loose, \$1 15¢; crown, loose, faced, \$1 25 ¢ box.

Dried Grapes—1¼¢ ¢ lb.

**NUTS**—Trade is light and slow. Some injury to almond orchards is reported by recent severe weather. We quote as follows: Chestnuts, 2¢@7¢; Walnuts, 6¢@7¢ for hard shell, 7¢@9½¢ for soft shell and 7¢@9½¢ for paper shell; California Almonds, 5¢@6¢ for soft shell, 2¢@2½¢ for hard shell and — for paper shell; Peanuts, 4¢; Hickory Nuts, 5¢@6¢; Filberts, 8¢@9¢; Pecans, 3¢ for rough and 8¢ for polished; Brazil Nuts, 27½¢ ¢ lb; Cocoanuts, \$5¢@5 50 ¢ 100.

**BUTTER**—The market is not in healthy shape. Receipts are in excess of the demand and producers have the situation against them.

Creamery—Fancy, 13¼¢@14¢; seconds, 12¢@13¢ ¢ lb.

Dairy—Fancy, 11½¢@12¢; good to choice, 10¢@11¢; fair, 8¢@9¢; store lots, 6¢@7¢.

**CHEESE**—Supplies are increasing, some dairymen making Cheese in preference to Butter. We quote: Choice to fancy, 7¢@8¢; fair to good, 4½¢@6¢; Eastern, ordinary to fine, 10¢@14¢ ¢ lb.

**EGGS**—Steady at current rates. Quotable at 12½¢@15¢ ¢ dozen.

**POULTRY**—Supply and demand both moderate. Hen Chickens are a shade higher, while other stock is steady at quoted rates. We quote: Live Turkeys—Gobblers, 11¢@12¢; Hens, 12¢@13¢ ¢ lb; dressed Turkeys, 14¢@15¢ ¢ lb; Roosters, \$4¢@5 for old, and \$6 50¢@7 50 for young; Broilers, \$1 ¢@5 for small and \$5¢@6 for large; Fryers, \$6¢@7; Hens, \$5 50¢@6 50; Ducks, \$5¢@7; Geese, \$1 50¢@2 ¢ pair; Pigeons, \$1 50¢@2 25 ¢ dozen.

**WOOL**—Most of the spring clip now offering comes from the south. Recent rains temporarily stopped shearing in the northern and middle counties. A good demand is expected for desirable Wools, while it is pretty certain that poor and defective stock will be dull of sale at low prices.

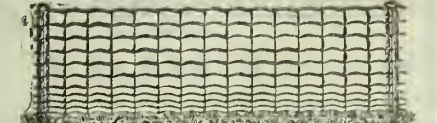
The weekly report of Thos. Denigan, Son & Co. says: "The conditions of our local market have not changed since our last weekly review. The chief receipts are comprised in Kern county's year's fleece and a few parcels of shorter defective stock from over about Huron. The long Wools are chiefly Wools sold at Bakersfield, and they are being packed here directly for Eastern shipment, so they don't particularly concern the conditions of the San Francisco market. The shorter defective Wools, referred to, find no buyers for the present, but, later along, the scourers will use some of them as they have done heretofore, though quotations for them will be lower than over before. So far shearing has not commenced in the middle counties, where the better San Joaquin Wools are to come from, but now, as the weather has cleared again, we shall have general shearing in that section, and toward the end of the month northern California will be doing the same."

San Joaquin, year's staple, ½ lb. .... 4¢@7¢  
Do, seven months ..... 4¢@7¢  
Calaveras and Foothill ..... 5¢@8¢

We quote Fall:  
Southern & San Joaquin, light and free ..... 5¢@6¢  
Do, defective ..... 3¢@4¢

**HOPS**—No business either locally or in a shipping way. It is estimated that about 15,000 bales yet remain on this coast of last season's crop. Some contracts are reported to have been made for the coming three years at an average of 100 ¢ ¢ lb to the grower. Quotable at 5¢@7½¢ ¢ lb, as to quality.

**GARDENER, GERMAN, SINGLE, AGE 31,** who understands gardening, cultivation of orchards, and general farming, wants situation on farm or nursery. Experience in foreign countries. Best references. Address M. L., Box E., Rural Press Office.



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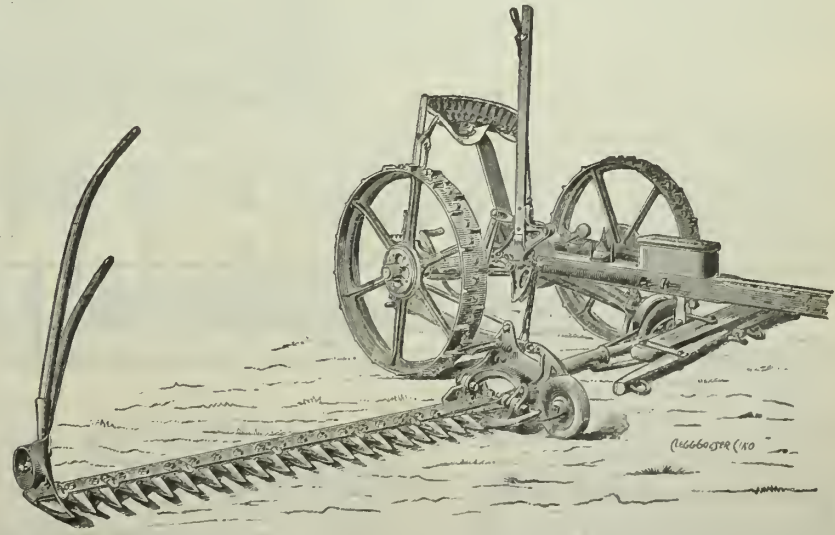
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## The Wage Worker in Germany.

Vice-commercial Agent George H. Murphy, writing from Luxemburg to the State Department, gives some facts germane to present economic discussion. He finds that the standard of wages is almost the same in Luxemburg as in Germany. Generally speaking, the average earnings of ordinary workmen amount to less than \$200 per annum. Women earn about half as much as men. The average wages of miners and foundry hands is less than \$1 a day. The average annual salaries of primary-school teachers are \$224 for males and \$179 for females. A very large majority of the officials and employees of the Government earn less than \$400 per annum.

On the other hand, speaking generally, the necessities of life cost as much in central Europe as they do in the United States. A workman's expenditures for clothing and rent may possibly be somewhat less there than in the United States, but in the town of Luxemburg coal costs \$7 per ton, eggs twenty-one cents per dozen, rye flour three cents per pound, wheat flour five cents per pound, sugar eight cents per pound, butter twenty-five cents per pound, beef nineteen cents per pound, veal and mutton sixteen to twenty cents per pound, fresh pork twenty cents per pound, and smoked pork twenty-three cents per pound.

GEORGE T. COMINS, the manager of the Beecher Falls, Vt., mill, on the U. S.-Canada line, relates an amusing story illustrative of the contract labor laws. It seems that the company's logs are stacked up in tiers about three feet apart on both sides of the line. One day recently the foreman was standing on one of the piles when a man approached and asked him if he wanted to hire any help. He replied that he did not, at the same time stepping over to the next pile. The man followed him, when the foreman turned and said: "When do you want to go to work?" "I thought you didn't want to hire anybody," said the man. "I was in Canada then," the foreman said, "and liable to a fine of \$1000."

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**List of U. S. Patents for Pacific Coast Inventors.**

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING MARCH 19, 1895.

36,169.—WAVE MOTOR.—C. L. Caldwell, Los Angeles, Cal.

36,069.—WAGON TONGUE SUPPORT.—J. F. Dehm, San Diego, Cal.

35,903.—LIFTING JACK.—M. P. Holmes, S. F.

35,955.—BRIEFLY CASE.—T. C. Nativel, Los Angeles, Cal.

35,956.—WINDMILL.—C. A. Norcross, Reno, Nev.

35,157.—NECKTIE FRAME.—G. W. Ritz, S. F.

35,964.—GAS ENGINE.—H. Swain, S. F.

35,930.—WINDOW SCREEN.—W. Thompson, Santa Cruz, Cal.

35,111.—STRINGING PIANOS.—C. S. Weber, San Jose, Cal.

35,970.—ADVERTISING DEVICE.—C. L. Whipple, Los Angeles, Cal.

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The signal service of the United States is founded on the text in Ecclesiastes: "All the rivers run into the sea, and yet the sea is not full." Commodore Maury writes that it was by thinking on the meaning of this assertion that he first got at the central idea of what is now the growing science of meteorology.

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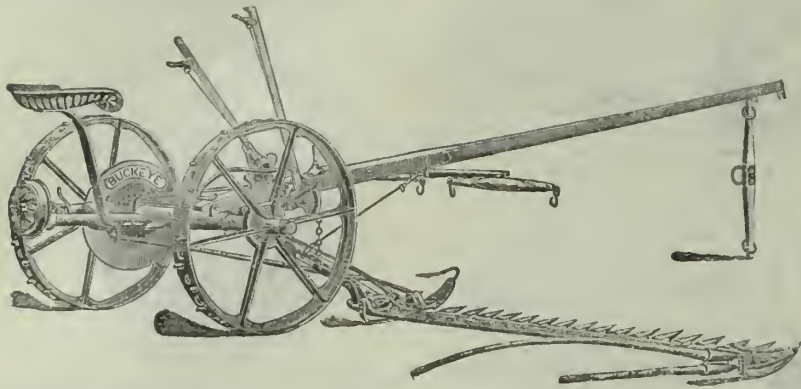
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THE MILLER & LUX RANCHO, FIREBAUGHS, CAL., Nov. 30, 1894.

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J. W. SCHMITZ, Supt. Miller & Lux Rancho.

It is the lightest, strongest, and without exception the best Mower in the world.

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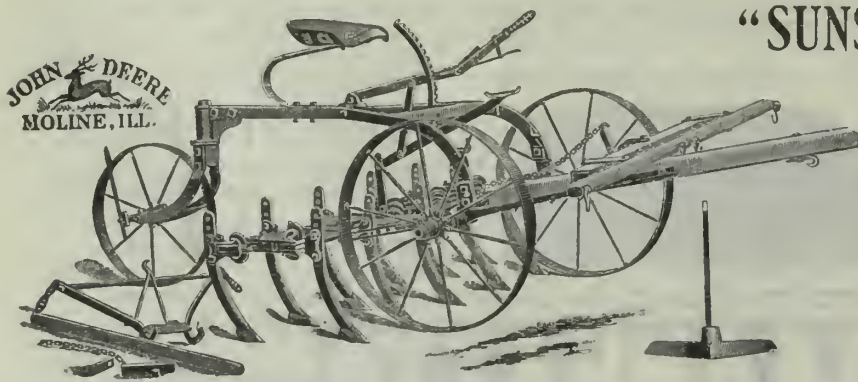
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The above sensible expressions have the endorsement of the successful fruit raisers of this State. Turning damp soil up to the sun's rays will not keep it damp, but the air will take the moisture.

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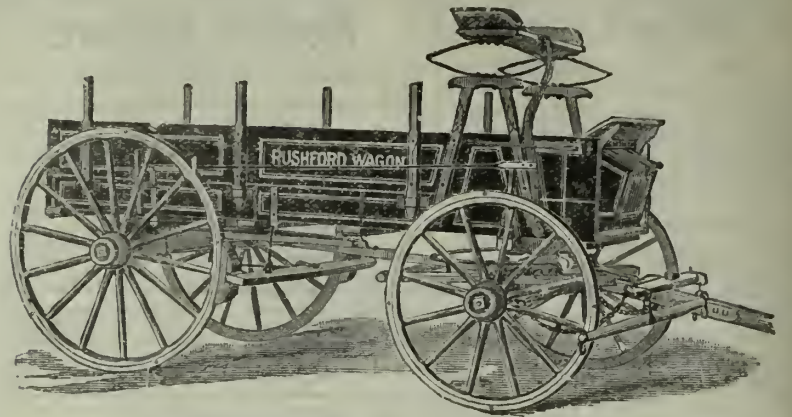


Use Shovels that Loosen the Subsoil  
Without Disturbing the Top Soil.

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Supt. Miller & Lux Rancho, at Bakersfield.



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# THE PACIFIC RURAL PRESS

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## AND CALIFORNIA FRUIT BULLETIN.

SAN FRANCISCO, SATURDAY, APRIL 13, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

### Productions of Lake County.

The display of products shown in the engraving on this page will be a revelation to many who have heard of Lake county only as the most picturesque region of California. The idea which perhaps some may have cherished that Lake county is too beautiful to be of serious industrial value is certainly a most mistaken one. It is true that tourists from abroad and Californians during their outings have said so much about the scenery of Lake county and

can be enjoyed at the late day of the year on which the photograph was taken, as the date upon its face indicates. It also shows in a general way what products may be expected as a reward of labor in the soil of the county. There were samples of the year growth of prune and plum trees, twelve feet and seven inches long; twenty-four varieties of apples are shown, and it may not be generally known that the apples from Lake county took the award at the New Orleans Exposition as the best keepers of the whole country. There are also six varieties of pears, four

exhibit of pure fruit jellies of all kinds, rich in color and flavor.

The Lake county people are now making a very commendable effort to have their county better known, and the RURAL PRESS wishes them every success. To see and know Lake county means to admire and love it. There should be a general disposition to give the county a call. It is reached from San Francisco by the San Francisco and North Pacific railroad to Hopland or Pieta, or by the Southern Pacific railroad to Calistoga. From any of



A NOVEMBER GATHERING OF LAKE COUNTY PRODUCTIONS.

the salubrity of its climate that they have forgotten to say also that it is a good place to seek a home and go to work. And yet so it is. The region is just as good for working as for idling, and the fact that it has not been industrially boomed makes it all the more worth the attention of the home-seeker. On another page of this issue may be found a very carefully prepared and interesting description of the county, its natural and industrial resources and its advantages for investment and settlement. Even more impressive of the possibilities of the county is the picture on this page, which shows what has been done and clearly demonstrates that the region is not an untried one. It has, in fact, an established reputation for many products, and if it had enjoyed the transportation facilities which some other counties have, it would have occupied as prominent a place in our industrial records as it has long enjoyed in our descriptive and hygienic literature.

The engraving shows how wide a range of products

of cherries (preserved), two of quinces, three of oranges, two of gooseberries, three of currants (preserved), fresh strawberries, grapes of all kinds, lemons of fine size and quality, olives, California and English walnuts, almonds, and a fine general display of fruit in glass, as the picture shows. The foreground indicates the wealth of the county in vegetables. There were grouped six varieties of potatoes, corn sixteen feet high, green peas, radishes, beans, six varieties of corn in the ear, ten varieties of squash and melons, beets as large as a five-gallon keg, carrots, and other large roots and tubers, all grown without irrigation. The cereal display included six varieties of wheat, three of oats, and corn in great variety. Excellent hops of two kinds, alfalfa seed, sunflowers, pampas plumes and Indian relics served as side points of interest. There was a full display of dried fruit, plums and prunes, peaches and nectarines, pomegranates and persimmons, and a collection of wines and brandies, also an attractive

these points Lakeport is easily reached by good stage lines. A visit to this favored section will always be remembered with pleasure.

THE excursion to the Los Angeles fiesta next week under the auspices of the Half Million Club now promises an attendance of 500 to 1000 people. Tickets are being sold rapidly. After the great affair in Los Angeles, the excursionists will go to Riverside and Redlands. On April 22d Riverside will hold an "orange day" in honor of the excursion. As the possible influences of this southern excursion the committee very truly says: "The scope of the excursion project has rapidly widened, and it is now apparent that we may not only benefit the State by wiping out all sectional lines, but there is an opportunity to achieve co-operation that will hasten State development. The movement in this direction promises the greatest results of the kind in the history of California."



# PACIFIC RURAL PRESS.

Office, No. 220 Market St.; Elevator, No. 12 Front St., San Francisco, Cal.

All subscribers paying \$3 in advance will receive 15 months (one year and 13 weeks) credit. For \$2 in advance 10 months. For \$1 in advance, five months.

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Any subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

Our latest forms go to press Wednesday evening.

Chicago Office.....CHAS. D. SPALDING, 330, 189 La Salle St.

Registered at S. F. Postoffice as second-class mail matter.

ALFRED HOLMAN.....Editor.  
E. J. WICKSON.....Special Contributor.

San Francisco, April 13, 1895.

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## The Week.

**State Board of Horticulture** This Board will hold a meeting next week to decide upon future courses, in view of the fact that the Governor did not approve the act giving them an appropriation. It is to be hoped that some way can be devised to carry on the work of the Board. It is poor economy to maintain men in important places and refuse them means for discharging their duties. Perhaps at their meeting the members of the Board may determine upon some *modus vivendi*.

**The Wheat Supply** In connection with what was said recently of the notable reduction in stocks of wheat in this country,

the reports of reduced outputs this year are of much interest. It is telegraphed from St. Paul that the indications at present are that the wheat output of Minnesota this year will be short 10,000,000 bushels. This will result from the fact that the soil will be put by farmers to other uses. Probably 800,000 acres of wheat land will not be seeded this year. In the wheat regions about 20 per cent less of wheat will be put in this year. Nearly 50 per cent of the farmers are turning their attention to hog and cattle raising and dairying. During the last two weeks there has been a notable increase in the number of creameries in counties along the southern and western borders of the State.

**Frost and Fruit.** Near the close of last week the valley fruit regions of California

had to bear the light end of a weather burden which had the weight of a blizzard on the other side of the Rocky mountains. Friday morning, before day-break, the mercury fell below the freezing point in many localities and notable injury was done to young fruit. This will still further reduce the visible supply of apricots, for many orchards which escaped three weeks ago had to accept the end this time. Evidently apricots will be valuable this year to those fortunate to have them. In some places there was wide destruction of peaches which were then just setting, and here and there even the little prunes had to show the hated black color. Information is not yet wide enough to justify general conclusions as to the reduction of the fruit crops, but it promises to be considerable except where elevation or other topographical protection prevented the extreme drop of the mercury.

**More Creameries.** Creamery building is progressing in spite of the low price of butter.

As a matter of fact the lower the price of butter the more need for the creamery system, with its labor and butter-saving machinery and methods, and the better price which the creamery product commands. The creamery in Sherwood valley, near Ukiah, is at work, putting out 80-lbs.

a day. It is a small creamery which expects to work chiefly for the home demand. A larger concern is projected in the Hollister region, where a number of farmers have decided to incorporate, with a capital stock of \$5000, divided into 500 shares. The land now under irrigation in Hollister valley furnishes abundant pasturage to sustain such an enterprise. Work on the building will commence immediately and the creamery will be in operation in thirty days. Still a larger concern is that at San Luis Obispo, where the Union Creamery Company filed articles of incorporation with the County Clerk on Monday. The capital stock was fixed at \$10,000, of which \$7000 is now paid up. The directors are: Peter Tognazzini, Louis and Angelo Ferasci, Adolph Zoppi, Mike and Joseph Rigetti and Henry Brunner.

**Farmers' Institute.** The farmers' institute at Tulare last week filled two days and was a very satisfactory and profitable

occasion. The local committee, under the presidency of Mr. John Tuohy, had given much effort for some weeks past to local preparations and the result was that many interesting and important topics were well presented and very freely and intelligently discussed. The attendance was drawn from long distances, even from beyond the borders of the large county in which it was held. A novel feature, and one which added much to the interest no doubt, was the enlistment of the pupils of the Tulare High School, who were invited to prepare reports of one of the lectures, and prizes were offered for the best two reports. The young people of both sexes seemed to take much interest in this exercise and will, we have no doubt, prepare good reports. The prizes are not yet awarded, because time must be given for the examination of the papers, but when the result is known we shall be glad to announce the victors in the RURAL PRESS. Farmers' institute work and high school work have much in common, and we doubt not the example set by Tulare is awakening general interest through the enlistment of the pupils in an institute exercise will be followed in other localities.

**Whey** We print upon another page the statement from Cornell University Experiment Station concerning

its experience in rescuing edible butter from the whey vat of the cheese factory. The account is interesting. It is not, of course, new that this fat existed in the whey, many factorymen have lain awake nights to think that in spite of all they could do the whey ran too white. The Cornell experiment simply shows that it can be recovered and is fit for table use. The question still remains whether it is worth the effort to get it in that form or whether the butter in the whey is like the gold in some ores—too hard to get to make its possession profitable. It has been calculated that perhaps 50 cents worth of butter per cow per year could be rescued from the whey. This is rather a small figure, when you think of the extra cost of getting this value. The run of the whey once or twice through the separator and the subsequent churning, will certainly call for time from the factorymen. Suppose it costs half what it is worth. The question then is whether it pays to rob the pigs of this slight token of good will or good swill. We imagine that where cheese making is well done, that is, where the run of fat into the whey is very small, it will pay better to take the elusive fat in pork than in butter.

**Russian Thistle.** It has been known for some time in private circles (as the reporters say) that the hated Russian thistle

had secured a foothold in California and was proceeding to enjoy the climate as other pilgrims from cold climates commonly do. A sample of the weed was shown at the Fruit Growers' Convention in Sacramento last November, and the location from which it came has just been visited by Mr. C. H. Shinn, inspector of the University Experiment Stations, for the purpose of ascertaining the extent of the Russian invasion and the means adopted for circumvention. The location is Antelope valley, in Los Angeles county, on the west side of the area commonly known as the Mojave desert. The weed was brought there some time ago, presumably in the packing of immigrants' baggage or in some such way. The Los Angeles county supervisors have undertaken to check the spread of the weed, and men are now employed in burning the masses of dry weeds (which still contain seed) and in cutting out the young plants which are now a few inches high. The area already invaded by the weed is considerable, and yet small compared with the vast area adjacent. A strong effort will be made for extirpation. As the plant is an annual, and the seed has been proved to be without longevity, it seems reasonable to think that on our constantly cultivated area of orchards, vineyards, truck crops, etc., it will not be difficult to keep it in check. On the other hand, in grain and pasture regions, it will probably be a great scourge. There is adjacent to the place now infested a great grain valley, and the railway leads to great valleys north and south. Freight teams do likewise, and it would seem to be the part of wisdom for adjacent counties to join with Los Angeles in the

present fight if there be no way to do the work with State funds. Very much will depend upon cutting off the plants while young. As it has time to develop, the plant becomes an immense tumble weed and goes before the winds, rolling and bounding and shaking out its seeds at every turn of the ball. The plant is not good, but it should die young.

## Gleanings.

**CLOVERDALE** is calling for a creamery. If this thing keeps on Sonoma county will soon be one vast dairy.

THE Sonoma Horticultural Society takes warm interest in the excursion movement inaugurated by the San Francisco Half-Million Club, and has pledged itself in the sum of \$75 to assist in the project.

THE people of Hollister have taken steps to establish a creamery. It is proposed to put in a ten-thousand-dollar plant. The project is in the hands of Jesse Ross, G. S. Nash, Gus Brown, C. Berbeck and A. D. Shaw, acting as a committee and representing the people generally.

THERE are signs of life in the horse market, though prices show no general advance. At Dixon, Solano county, last Saturday, the editor of the RURAL was informed that three car loads had been shipped from that point within a few weeks. A Davisville letter of the 6th inst. says: "G. Lindauer shipped two carloads of horses to Honolulu on Friday. They were purchased from the farmers in this vicinity."

AN ARHEM *Gazette*: A peculiar freak of nature was discovered by a farmer living near town a week or so ago, when a perceptible diminution in the milk given by one of the cows caused an investigation to be made, with the result that one day a pig was observed to follow the cow and at every opportunity proceed to satisfy its craving for milk at the well-distended udder. The enterprising shoat was dispatched, and the household again has its usual quantity of cream.

RIVERSIDE *Enterprise*: Horticultural Commissioner House spent a few hours lately in investigating the orchards where colonies of the rhizobius or black ladybug were planted last fall, with the result that he discovered considerable larvae of the insects. This discovery evidences the fact that these valuable bugs will propagate here, and that the cold weather of the past winter did not kill them off. Mr. House says that it is his opinion, from what research and examination he has made, that the rhizobius will continue to multiply in numbers very rapidly as the warm weather advances, and that it won't be long before the bugs are numerous enough to give a good account of themselves in the work of scale-destroying.

LOS ANGELES *Times*, 7th inst.: The orange market has continued in a very unsatisfactory condition during the past week, the large shipments of European and West Indian oranges having cut off the demand for California fruit, which labors under the great disadvantage of having to pay very high rates of transportation to the East. Oranges have been coming in freely from Jamaica, Cuba, Porto Rico, Mexico and other places, in addition to the large shipments from Europe where there appears to be an almost unlimited quantity to draw on, and at low prices. To a great extent these heavy importations have neutralized the effect of the Florida shortage, as far as California is concerned. It is still believed, however, by the exchanges that the price will improve before long.

TULARE *Register*: A creamery can generally command about everything it needs in its business, except cream; but cows which milk themselves are not good creamery cows, and when the calves do the milking they "hog" it all. Women won't milk the cows now that woman's rights has come to be an issue, and men, well it makes the men so tired to do the milking that they dislike to, and so don't. The Hanford creamery has only nine customers left, where it needs a hundred, and the Zumwalt creamery is hard pushed for lacteal fluid to do business on. What is wanted is an apparatus that six mules can be hitched to which will milk a hundred cows before breakfast. Give us this sort of a "contraction" and the San Joaquin valley will butter the whole earth on both sides good and thick, but as a people we don't like to milk. This is the prolific source of our discontent.

OROVILLE *Register*: Each year Butte county pays out a large sum for butter made in other counties. Just how much money is paid it is impossible to tell, but in all the large towns the merchants depend upon getting their butter from either the mountain valleys or from the coast. There is no reason except the indolence of the farmers to prevent them from supplying all the butter that is demanded. Some may think the merchants won't buy of them, but if that were true the people will. Let any man bring good butter—first-class, sweet-tasting butter—to a town and he can sell it for cash. If wheat-growers would turn their attention to dairying some radical changes would follow. They would give employment to men, enhance the value of their property, enrich their lands, increase the amount of money received each year, lessen their store bills and gradually get out of debt.

A FRUIT-GROWER writes from Campbell's to the San Jose *Mercury* as follows: "Will you not come to the help of the fruit-growers and agitate the subject of smoking to keep off frost. This is the difficulty: A gets up at 2 A. M., finds his thermometer indicates 32 degrees, goes out and lights his previously prepared piles of rubbish, stands back and sees the clouds quietly rise up over his trees, slowly drift across the road, and settle down on B's orchard. That is one trouble; another is that in the absence of any warning the orchardist is not on his guard and wakes at his usual hour in the mornings to find the mischief done. Now suppose the observatory on Mt. Hamilton was connected with a half dozen stations or more throughout the valley, the temperature reported, and warnings given to all the valley by electric flash light. Then we could sleep until actual danger came when the school-house bells, or other means adopted, aroused us to universal activity."

SAN DIEGO telegram, 8th inst.: The San Diego lemon fair opened to-night at the Chamber of Commerce, with large exhibits from all parts of the country, and flattering attendance. The fair is almost entirely devoted to the exposition of lemon culture and the methods of curing, packing, etc., and is the first one of the kind ever held in the United States. In several exhibits advantage was taken of the visits of growers to Sicily and Italy, with the result that the best methods of the Old World are combined with the progressive ideas of the



New. The showing is surprising even to the people here who are familiar with the claims of San Diego as the banner lemon county of the Union. The large exhibition rooms of the Chamber of Commerce are devoted to the show and the decorations consist mainly of novel uses of the lemon, every imaginable form being given to the exhibit. The fair will continue through the week and excursions will run from Los Angeles and surrounding towns.

**OROVILLE Register:** The figures given by many farmers in the *RURAL PRESS* concerning wheat growing in this State are misleading. It is true they give the cost of plowing and sowing, of harvesting and thrashing, but they do not tell the whole truth. How, for instance, is a wheat grower to support himself during the long period when he cannot work his farm. Out of the twelve months, not over three months are taken up by him in plowing, planting and harvesting. Now, if the support of himself and family and the feed and care of his teams were limited to the time named, then the figures given by the farmers would be correct. The farmer must live, however, the other nine months of the year, and his support must come from the profits of his crop, so that in reality the whole expense of the farmer, his family, his teams, etc., must be charged to the crop of wheat. If the system was changed so that a wheat farmer could grow hay, fruit, vegetables, keep hogs, cows and poultry, then these would help pay expenses, but, under the present conditions, the wheat sack must pay for everything.

NEVER since the organization of Santa Clara county, says the *Mercury*, has such interest been taken in poultry as at the present time. Fancy fowls are being bred in all parts of the county by almost all people, from the banker to the man who peddles vegetables. In looking up the subject one is astonished to find that it leads almost all other industries. The income from the poultry industry of the United States in 1890 was about \$500,000,000, and it is now estimated that the present annual earnings from poultry are about \$600,000,000. There is no industry so equally divided among the people, as almost all people keep poultry, and some people are kept by poultry. Some months ago a poultry association was formed at San Jose, with the following membership: Thomas F. Morrison, James W. Rea, Tyler Beach, Mrs. Tyler Beach, John McNaught, William Winslow, Mrs. T. E. Williams, Charles R. Harker, E. W. Sanderson, W. S. Winslow, R. O. Shively, T. L. Kirkpatrick, N. H. Douvau, A. B. Farwell, Mrs. L. F. Sanderson, W. C. Hansou, Miss E. E. Purdy, G. R. Carmen, O. J. Albee, Paul Stockton, L. E. Brainard, J. L. Mosher, L. L. Crabb, H. W. Conklin, M. H. Osgood, and E. H. Freeman of Santa Clara.

**WINTERS Express:** Any one seeking evidence of the beneficial results from irrigation would find an interesting study in the orchard of Barnes & Clark, near Esparto. Besides the fruit trees, pasturage and garden truck, there are about 250 rows of strawberries and blackberries. These berries were irrigated last summer, the water being drawn with a triple pump. It is the distribution of this water, and its influence on the valuable growth of vegetation, that makes the study highly interesting. Several openings in a ditch will distribute the volume of water almost equally and at the same time over the land to be irrigated. This is not so with a pump, which throws the water into a single channel and then is distributed through lateral ditches over the land. These ditches, which are nearest to the beginning of the channel, naturally draw and absorb first, and consequently most of the water, and to this reason a difference in the growth of the vines can be assigned. The strength and rankness of the vines increase in almost every row as it approaches the farther end, or the beginning of the channel, which demonstrates the great value of having an abundance of water for promoting the growth of vegetation.

THE annual meeting of the Campbell Fruit-Growers' Union was held on the 4th inst. The sense of the meeting was taken as to manager, and there was almost a unanimous request to have G. T. Duncan employed as such. Mr. Duncan was manager two years ago, and he gave such satisfaction that this choice would seem an eminently wise one, especially in view of the failure of the experiment last year. The directors are F. M. Righter, G. T. Duncan, George S. Rodeck, Frank Waldo and W. W. Turney, the first four being re-elected, the fifth, R. S. Gates, positively declining to serve another term. The following were elected an advisory board: P. G. Keith, Captain J. A. Hamilton, F. N. Parr, W. P. Cragin and D. J. Soper. Hereafter the annual meeting will be held the second Wednesday in May. It was reported that the plant, as it now stands, had a value of \$30,000, upon which there is a debt of \$10,000; the amount of stock annually sold is a little over \$18,000, or less than one-fifth of the total stock. During the past season 3267 tons of green fruit were hauled by the association, and a large portion of this amount has gone into consumption. The plant was taxed to its utmost capacity last season, owing to the immense crop of apricots grown here. Nearly all of the seventy-nine shareholders attended the meeting.

INTERVIEWED at San Jose last Thursday (the 6th inst.), Col. Philo Hersey said: "It is utterly impossible to tell even approximately how much of last year's shipment of fruit is now unsold in the East. The parties who hold the fruit there refuse to state the amount. There is probably no great amount, however. They are buying there from California markets what they want from day to day. Trade is quite uniform. Stocks that are there are going out into retailers' hands regularly and quite freely. Prices are not high. There seems to be no buoyancy of feeling at present among producers and dealers in regard to an increase of prices. Now the fruit market is a market in which the bears have the best of it. Of last year's crop of fruit now in this valley there are about 140 carloads of all kinds, the great bulk being prunes. The amount of fruit in the valley now is the same as that of last year at this time, while in the East the amount is somewhat less than last year. I should advise any person having on hand a stock of apricots in good selling condition not to sell at present, but to keep over until next year. The severe frost that visited this vicinity and Vacaville some weeks ago, together with the frost on the night of April 4th, will reduce the crop of apricots to one-half of what it was in 1894. Peaches, cherries and pears were somewhat injured by the freeze of the 4th, while the damage done to prunes cannot now be estimated, as the effects of the cold will not be manifest until about June 1st. Then the half-grown prune, if its pit has been injured, withers and falls, although the greater proportion of prunes injured at this stage will turn yellow and drop off when the size of grains of wheat. If there are no more

frosts nor freezes, no continued cold between now and May 15th, nor extreme heat, we may expect a fair crop of prunes, peaches, and possibly an average crop of cherries."

SANTA CLARA county has been unloading her dried fruits at a prodigious rate during the past few weeks. The *Mercury* says: The total shipments last week amounted to 1,570,845 pounds, against 1,606,625 pounds during the last week in March last year, a decrease of 35,780 pounds. The prune shipments continue to be far in excess of those at this time of any previous year, being 517,500 pounds last week. Shipments of dried peaches and apricots are falling off, the pack of dried peaches having nearly all been moved, while the few apricots that remain are being hoarded for the increase in price which is bound to result from the frost of two weeks ago, which went far toward destroying the crop in other portions of the State. Wine shipments are also on the decrease, being 522,855 pounds last week, against 1,239,120 pounds during the week previous. Canned goods, on the contrary, nearly doubled on the week ending March 23rd, but fell far short of the corresponding week of last year, the figures for last week being 121,090 pounds and those in the corresponding week in 1894 were 397,455 pounds. Green apples continue to be a factor of the overland shipments, but it seems certain that the figures recorded in the appended statement will be the last until the new crop ripens. Thus far in 1895 the overland shipments amount to 26,321,215 pounds, against 14,673,990 pounds during first quarter in 1894 and 8,736,505 pounds in 1893. During the twelve months ending December 31, 1893, the total overland shipments amounted to 97,781,265 pounds, the shipments during the first three months being a trifle less than 9 per cent of those of the year. \* \* \* On April 1st, last year, there remained in the valley less than 4,000,000 pounds of dried prunes and not to exceed two carloads of all other dried fruits. Safe estimates place the dried fruits now in warehouses and in the hands of packers at not less than 150 cars, or 3,600,000 pounds, and it is safe to say that this is a low estimate.

### Wheat Feeding.

TO THE EDITOR:—I submit below an estimate of the wheat fed to live stock in the United States from July 1st, 1894, to April 1st, 1895, compiled from extensive returns from farmers, live stock breeders and feeders and grain dealers, covering the entire country. These returns have been received during the latter half of March, and the final figures have been compiled as conservatively as the reports received would possibly warrant:

|                                        | Bushels.   |
|----------------------------------------|------------|
| New York.....                          | 1,320,000  |
| Pennsylvania.....                      | 2,340,000  |
| Maryland.....                          | 1,350,000  |
| Virginia.....                          | 1,450,000  |
| West Virginia.....                     | 1,200,000  |
| Ohio.....                              | 7,430,000  |
| Kentucky.....                          | 2,170,000  |
| Tennessee.....                         | 1,250,000  |
| Indiana.....                           | 3,240,000  |
| Illinois.....                          | 4,420,000  |
| Michigan.....                          | 3,710,000  |
| Wisconsin.....                         | 2,560,000  |
| Minnesota.....                         | 3,920,000  |
| South Dakota.....                      | 4,030,000  |
| North Dakota.....                      | 850,000    |
| Iowa.....                              | 3,650,000  |
| Nebraska.....                          | 4,620,000  |
| Kansas.....                            | 9,890,000  |
| Missouri.....                          | 3,870,000  |
| Texas.....                             | 1,250,000  |
| Eight other Eastern States.....        | 1,200,000  |
| Nine other Southern States.....        | 2,100,000  |
| Seven Rocky Mountain States.....       | 1,650,000  |
| California, Oregon and Washington..... | 6,800,000  |
| Total.....                             | 83,130,000 |

There were, in 1894, 400,000,000 bushels less corn produced than in 1893, 800,000,000 less than in 1891. Kansas produced 100,000,000 less and Nebraska 140,000,000 less of corn in 1894 than in 1893. Over much of the United States during the last eight months corn has been worth more, pound for pound, than wheat. It is my personal opinion that these figures more likely underestimate the actual quantity of wheat fed than they overestimate it. They have been obtained with much labor and care.

CHAS. L. HYDE.

Pierre, South Dakota, April 1st.

### Paris Green Treatment For Codling Moth.

Secretary Morton in an interview, at Washington recently, said:

"The apple trade of the United States with foreign countries has always been profitable. The demand for apples grown in the United States has always been in excess of the supply. The United Kingdom of Great Britain, alone, during the nine months ending September, 1894, paid the orchards of the United States \$2,500,000. The greatest enemy to our export apple is the 'Codling Moth.' But the entire crop can be made wormless if the orchards of the United States will use the following recipe:

"Use Paris green at the rate of one pound to 150 gallons of water. Weigh out sufficient poison for the capacity of the tank used, and make it into a thin paint with a small quantity of water and add powdered or quick lime equal to the weight of poison used, mixing thoroughly. The lime takes up the free arsenic and removes the danger of scalding. Strain the mixture into the spray tank, taking care to pulverize and wash all the poison through the strainer. During the operation of spraying see that the liquid is agitated with sufficient frequency to prevent the settling of the poison.

"The prime essential in spraying is to break up the

liquid into a fine mist, so as to coat every leaf and part of the plant as lightly as is consistent with thoroughness. This should not require more than from three to seven gallons for a comparatively large fruit tree.

"Let the first spraying follow within a week after the falling of the blossoms of either apple or pear, and follow this with a second treatment just before the fruit turns down on the stem, or when it is from one-fourth to one-half inch in diameter. The first spraying reaches the eggs laid by the moth in the flower end of the fruit, shortly after the falling of the blossoms, and the second the later eggs laid by be-lated moths. Do not spray trees when in bloom, and if a washing rain immediately follows treatment, repeat the application."

It may be added to the foregoing that for late apples it is usual to spray again later as the moth has later broods in this State.

### Is Roup Contagious?

TO THE EDITOR:—Can you inform me as to the contagion of roup in chickens? I know, or think it is, contagious where they roost together in the same house, but do you think it is where they do not?

I have some choice Brown Leghorn chicks which am raising and will have them roost in a separate house from any other fowls (which have the roup). Now, do you think my Brown Leghorns will become infected? SUBSCRIBER.

If you take away your healthy chicks and do not let them roost, run or feed with those infected with the roup, they will not necessarily catch it; but you will have to watch them very carefully from now on, as some of them may already be impregnated with the disease which may manifest itself later on.

Alameda.

H. F. WHITMAN.

### FLORIST AND GARDENER.

#### Hardy Palms at Santa Barbara.

Many people in the thermal belts of California could add greatly to the beauty of their grounds by the freer use of hardy palms, and to that end will welcome information of what species not generally known are doing in the Santa Barbara region. Of course these palms will not succeed everywhere, but most of them are about as hardy as citrus fruits, so planters can judge of the wisdom of planting them on their places by the behavior of those trees. Dr. F. Franceschi, to whose acclimation enterprise we have previously alluded, has recently made a study of the palms growing in his region, and from his writing we take the following:

Very likely the palm first planted in Santa Barbara was a common date palm (*Phoenix dactylifera*), considering that the first Franciscan missionaries used to plant it always near their churches and buildings. None of that age are extant, however, but it is safe to say that there are more date palms in Santa Barbara than in any other town on the coast, many of them of good size. The finest and largest grove of them is to be seen at Glen Annie, beyond Goleta, although some of the largest trees were lifted and shipped to the World's Fair at Chicago two years ago. It is not unfrequent for the date palm to bear fruit here and produce perfect seeds, but it must be said they seldom attain all the desired sweetness, probably owing to our summers not being hot enough.

Of other kinds belonging to the same genus *Phoenix*, and having all a certain degree of likeness with the preceding, *P. canariensis* is the more generally known, of which the finest specimens are probably those in the grounds of Mr. C. F. Eaton at Montecito, bearing a truly wonderful amount of fruit every year. There is also at the same place the finest specimen of *Phoenix reclinata* from Southern Africa, which is noticeable for its immense fronds gracefully recurring edgewise and the bright orange color they have at the base. Probably all the other known species of *Phoenix* have been introduced and do well in our gardens without exception, but they are generally too young to deserve special mention.

To two different groups of equally pinnate leaved palms, two of them belong which can be said to be nearly monopolized by Santa Barbara. Nowhere, indeed, in the United States are to be seen more *Cocos plumosa* and more *Scaevola elegans*, and the time is not far when these noble plants will impart a special character to our town, with their feathery heads towering above other humbler vegetation. *Cocos plumosa* takes the lead, and good-sized specimens are rather numerous, the largest having been planted some fifteen years ago by Mr. Kinton Stevens in his grounds at Montecito. None of them have flowered up to now. Of other specimens of *Cocos* belonging mostly to Southern Brazil and the great basin of River Plate, many are to be seen already in our gardens, some of them promising to supersede in general favor the above mentioned, both in gracefulness and hardiness, which last is, however, quite out of the question. Special mention must be made here of a large specimen doubtfully



referred to *Cocus flexuosa* or to *Cocos Romanzoffiana*, growing in the garden of Mr. G. W. Chapin at the corner of Chapala and Micheltorena streets, where another most remarkable pinnate-leaved palm (probably an *Astrocaryum* from Central America) is throwing up with utmost vigor the most formidable black spined leaves one can imagine.

*Seaforthia elegans*, or *Archontophoenix Cunninghamiana*, as it ought to be correctly called, a native of northeastern Australia, is equally at home in Santa Barbara and nearly as frequent as *Cocos plumosa*. Some of them have flowered, and the one on Victoria street belonging to Mr. C. S. Sheffield, and probably some eighteen years old, has repeatedly been ripening seeds. Apart from the elegance of its foliage and the slenderness and smoothness of its trunk, the flowering of this palm is one of the most beautiful things to see, those immense bunches hanging down like an immense marabout of a delicate pink color, succeeded by round berries which turn to a bright red when approaching maturity.

People have asked if the true cocoanut (*Cocus nucifera*) has been or could be grown in Santa Barbara. To my knowledge it never has been, but there is no doubt that it would be worth trying to obtain and experiment some of the hardiest varieties of this most precious palm of all warm countries. The so-called *Coquito*, or small cocoanut of Chile (*Jubara spectabilis*), is not uncommon, but not so extensively planted as it ought to be, people wrongly considering it as a very slow grower, which is not the case if liberally treated, as shown by the two beautiful specimens at Mr. K. Stevens', in Montecito, which I believe to be the largest in southern California.

Another pinnate-leaved palm having some likeness to the *Seaforthia* but growing to a larger size is *Ptychosperma* (correctly *Archontophoenix*) *Alexandra*, and of this, too, there are a few good specimens in our gardens, but not yet much developed. A few more palms must be mentioned, belonging to the same section of the feathery ones. Four kinds of *Kentias* (more properly *Howea Belmoreana*, and *H. Forsteriana*, *Howeysce Canterburyana* and *Chinostigma Moorcanum*), all of them from Lord Howe's Island, and four or five different kinds of *Chamedorea* from Mexico and Central America, have been planted to some extent quite recently and appear to thrive well, mostly if allowed partial shade.

Fan-leaved palms are generally not so much in favor as the preceding section, but still Santa Barbara possesses the most remarkable specimens known in gardens of any part of the world, of both species of *Erythea*, *E. armata* and *E. edulis*. The first, commonly called the "blue palm," a native of Lower California, finds here the most congenial soil and climate, and beautiful specimens are not rare, the largest being a couple at Mr. K. Stevens', in Montecito. More plentiful still and represented by larger specimens is *Erythea edulis*, the "Guadalupe palm," as it is called, from being a native solely of the Mexican island of Guadalupe, 250 miles south of San Diego. The largest of these, said to be over thirty years old and most likely the parent of the other large specimens, can be seen in Dr. Brown's garden, State street, south of Gutierrez, and has a clean, smooth trunk of about nine feet high. Of a species of *Brohea*, probably from Mexico, with most elegant leaves, there are half a dozen plants scattered about town, perhaps ten years old, none of which has flowered yet, not allowing proper identification. *Chamarops humilis*, from southern Europe, and *Chamarops* (properly *Trachycarpus*) *exceles*, from China, are plentiful, and there is also not unfrequently what appears to be a depauperate form of the latter, known under the name of *Chamarops robusta* (?) and probably introduced from Japan, which I believe to be very little, if at all, known in gardens out of Santa Barbara. The Queen of Palms of this section, to be sure, is *Livistona* (or *Corypha*) *Australis*, from northeastern Australia, rather extensively planted, of which the noblest specimen is undoubtedly the one belonging to Mrs. J. Edwards, on the corner of Anapamu and Garden streets. The nearly related *Livistona chinensis* (*Latania borbonica* of gardens) is not so common, nor so freely growing, although there are a few good specimens which appear to thrive better in partial shade. Less common still and equally shade-loving appear to be the Chinese and Japanese *Rhapis flabelliformis*.

Of Sabals not many have been planted, but we have *Sabal Palmetto*, from Florida and Georgia, of which most beautiful specimens are to be seen in Mr. Joseph Sexton's grounds at Goleta. This is considered to be a slow grower, but it will not be so if allowed plenty of water, considering that all Sabals are marshy and sea-coast loving plants. The dwarf Sabal (*Sabal Adansoni*), from Carolina southwards, is not uncommon, but the most beautiful of all is the unique specimen, very likely of *Sabal Blackburniana*, existing in the grounds of Mr. E. H. Sawyer at Montecito, probably over twenty years old, and one of the most striking plants to be admired in this country.

From the above notes it appears that over thirty distinct species of palms have already obtained citizenship in Santa Barbara, many of them flowering and bearing fruit like in their native countries, while a still larger number is on trial and promising to

succeed in the same way. Many more remain to be introduced and our efforts must work in that direction: The *Ceroxylon andicola*, or Wax Palm, one of the most majestic of this majestic family, growing over the Andes up to 8000 feet; the *Oreodoxa oleracea*, or Cabbage Palm, of West Indies, probably the tallest and quickest growing of all palms (it attains 170 feet in comparatively few years); the extremely rare *Pseudophoenix Sargentii*, lately discovered in extreme southern Florida; the *Tuania Australis*, native only of the secluded island of Juan Fernandez; and a host of others, we may hope to have well established in our gardens within a few years.

## THE SWINE YARD.

### Pig Feeding in Oregon.

The Oregon Experiment Station at Corvallis has repeated its experiment in feeding pigs with wheat alone and with wheat mixed with other grain, and in Bulletin 35, just issued, Prof. H. T. French gives the results in detail. The eight pigs were about seven-eighths Berkshire, but not an exceptionally good lot. They were farrowed Feb. 16, 1894. The pigs were weaned May 1st, and up to June 1st, when the weights began, they were fed on shorts and water, with some slop from the boarding hall. They were fed on the food mentioned above while running with the sow. On June 1st the feed was weighed to them, and the pigs were weighed in a group, as seen in the table. At the beginning they weighed 328 lbs. and gained 128 lbs. the first month, or a trifle over one-half lb. each per day. During this period the pigs were turned on a patch of vetches and were fed a pound of shorts each per day and all the water they wanted. The yard contained seventeen square rods of vetches. They were not given the entire yard at once; but by means of a portable fence, the yard was extended so as to keep the vetches as fresh as possible. During the next period, from July 1st to 28th, the lot gained 190 lbs., or a total gain of 318 lbs.; total amount of grain consumed, 934 lbs., or one pound of gain to 3.1 lbs. of grain. During this latter period the pigs were fed on vetches which were cut and given to them twice daily. There is less waste when fed in this way. In the two months from June 1st to July 28th the pigs ate the vetches from thirty square rods of ground, or a trifle less than one-fifth of an acre. Pigs are very fond of the vetch. They would very often leave their grain for the vetch. On July 28th the vetch became too dry to use and the pigs were fed from that time till October on shorts and water. From July 28th to August 24th the pigs gained 117½ lbs.—quite a falling off, due no doubt to taking them away from the green feed. From August 24th to October 1st the pigs gained 227½ lbs., making a total gain, after taking off the green feed, July 28th to October 1st, of 345 lbs. They consumed 1253 pounds of shorts during this period, or a pound of gain was made to every 3.63 pounds of grain. This is one-half pound more of grain to make a pound gain than when fed on vetches. While the pigs did not make such rapid gains on the vetch, they made a good growth. The average daily gain while feeding on the vetches was .68 of a pound. These figures are not as large as we might expect, but it is much better than to barely keep up animal existence.

**Fattening Period.**—The pigs were divided into two lots October 1st, and the second experiment began, viz., that of testing chopped wheat alone as compared with a mixture of grains.

Lot No. 1 was fed clean chopped wheat and water. The feed was weighed and placed in a pail with water and allowed to stand from one feed to the next. A little salt was added to each feed.

Lot No. 2 was fed on a mixture of two parts chopped wheat, one part shorts, and one part chopped oats, determined by weight. This was continued to January 4th, when the oats were withheld.

The pigs were fed at eight o'clock in the morning and five at evening. Charcoal and ashes were kept before the pigs all the time. They were permitted the run of a small yard, connected with the pen, except when it became too muddy. There is nothing gained by compelling or permitting pigs to wallow in mud, however much they seem to enjoy it. The importance of feeding pigs from troughs needs to be emphasized. It is too often the case that the pigs are required to pick up the grain out of a perfect slough of mud. The pig may do fairly well; but it is not economy to feed pigs whole grain strewn on the ground, especially wheat or oats. In feeding corn on the cob, there is not so much loss, but even then it is not the most economical method. Only a few dollars are necessary to provide troughs and a floor on which to feed the pigs. The Oregon farmer has not realized the need of barns and pig pens; but as he is compelled to grow more pork, and make more butter, as a source of revenue on the farm, this need will become more apparent.

**Results.**—Tables are printed showing that lot II made 752 lbs., or an average daily gain of 1.7 lbs. each. Lot I gained 646 lbs., or an average daily gain of 1.46 lbs. The pigs fed on the mixture ate 156 lbs. more of grain than those fed on chopped

wheat alone. The shorts fed to lot II was a little cheaper than chopped wheat, hence the cost of producing a pound of pork was a little less in this lot than in lot I. The 106 lbs. of gain over lot I also assisted in bringing the cost of production down considerably. It is shown in the summary that a bushel of chopped wheat, 60 lbs., produced 12.9 lbs. of gain in lot I. At 4 cents per lb., gross weight, for the pork it would give a return of 51.6 cents per bushel for the wheat. In lot II there was a gain of 14 lbs. for every 60 lbs. of grain consumed. During the second period, table No. 2, there was a marked difference in the amount of food to produce a pound of gain, and consequently in the cost. There is one fact, which we have noticed in former reports, and that is the increased use of grain to make a pound of gain as the pigs near the finishing point, or maturity.

### Treatment of Hog Cholera.

Farmers' Bulletin No. 24, issued by the United States Department of Agriculture, on hog cholera, says that the most efficacious formula that has been tried for the disease is as follows:

|                           | Lbs. |
|---------------------------|------|
| Wood charcoal.....        | 1    |
| Sulphur.....              | 1    |
| Sodium chloride.....      | 1    |
| Sodium bicarbonate.....   | 2    |
| Sodium hypo-sulphite..... | 2    |
| Sodium sulphate.....      | 1    |
| Antimony sulphide.....    | 1    |

These ingredients should be completely pulverized and thoroughly mixed.

The dose of this mixture is a large tablespoonful for each 200 pounds weight of hogs to be treated, and it should be given only once a day. When hogs are affected with these diseases, they should not be fed on corn alone, but they should have at least once a day soft feed, made by mixing bran and middlings, or middlings and cornmeal, or ground oats and corn, or crushed wheat with hot water, and then stirring into this the proper quantity of the medicine. Hogs are fond of this mixture; it increases their appetite, and when they once taste of food with which it has been mixed, they will eat it though nothing else would tempt them.

Animals that are very sick, and that will not come to the feed, should be drenched with the medicine shaken up with water. Great care should be exercised in drenching hogs or they will be suffocated. Do not turn the hog on its back to drench it, but pull the cheek away from the teeth so as to form a pouch, into which the medicine may be slowly poured. It will flow from the cheek into the mouth; and when the hog finds out what it is, it will stop squealing and swallow. In our experiments, hogs which were so sick that they would eat nothing have commenced to eat very soon after getting a dose of the remedy, and have steadily improved until they appeared perfectly well.

This medicine may also be used as a preventive of these diseases, and for this purpose should be put in the feed of the whole herd. Care should of course be observed to see that each animal receives its proper share. In cases where it has been given a fair trial, it has apparently cured most of the animals which were sick and has stopped the progress of the disease in the herds. It also appears to be an excellent appetizer and stimulant of the processes of digestion and assimilation; and when given to unthrifty hogs, it increases the appetite, causes them to take on flesh and assume a thrifty appearance.

### Rainfall and Temperature.

The following data for the week ending 5 A. M., April 10, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week..... | Total Seasonal Rain-fall to Date..... | Total Seasonal Rain-fall Last Year to Same Date..... | Average Seasonal Rain-fall to Date..... | Maximum Temperature for the Week..... | Minimum Temperature for the Week..... |
|----------------------|----------------------------------|---------------------------------------|------------------------------------------------------|-----------------------------------------|---------------------------------------|---------------------------------------|
| Eureka.....          | 40                               | 38.78                                 | 50.29                                                | 37.18                                   | 60                                    | 32                                    |
| Red Bluff.....       | 01                               | 26.80                                 | 19.15                                                | 22.22                                   | 76                                    | 36                                    |
| Sacramento.....      |                                  | 22.74                                 | 13.85                                                | 18.58                                   | 72                                    | 42                                    |
| San Francisco.....   | 02                               | 23.89                                 | 16.10                                                | 22.04                                   | 72                                    | 44                                    |
| Fresno.....          |                                  | 12.63                                 | 6.17                                                 | 10.10                                   | 78                                    | 34                                    |
| Los Angeles.....     |                                  | 15.26                                 | 6.40                                                 | 18.24                                   | 82                                    | 42                                    |
| San Diego.....       |                                  | 11.31                                 | 3.98                                                 | 10.83                                   | 80                                    | 46                                    |
| Yuma.....            |                                  | 2.97                                  | 2.16                                                 | 3.47                                    | 90                                    | 46                                    |

**GILROY Advocate:** Good times are anticipated here this summer. Crop prospects were never better and the stock will have an abundance of feed with which to make flesh. Dairies continue to send out their usual tonnage of cheese monthly; hogs are fattening, and everything that grows and brings profit to the farmer is full of promise. What's the matter, ye growers? Look on the bright side of things and smile over the prospects.



## HORTICULTURE.

### A Rare Species of Walnut.

TO THE EDITOR:—Under the above heading the Santa Rosa Republican publishes the following:

Will Austin and Charles Connelly have been pruning trees for Luther Burbank. They boasted of their powers the other day, saying that they had pruned \$60,000 worth of trees in eight hours. Investigation proved that their story was true. Their day's work was remarkable in another way than for its size; they had pruned only six trees, but there are only seven trees of that kind in the wide, wide world, and the same are correspondingly valuable. They are the crossbred walnut, a species originated by Mr. Burbank about eighteen years ago by hybridizing the English walnut and the American black walnut. This species has excited much interest among botanists. Scientific societies in Europe and America have devoted considerable attention to it. Professor Trelease, of the St. Louis Botanical Garden, is now studying it, as also are Professor Sargent, of Harvard University, and the officials of the United States Agricultural Department.

The above item, clipped from the Santa Rosa paper, was sent to me by a gentleman of Auburn in this State, who procured from me this winter sixteen grafted walnuts which he planted avenue-like from his gate to his residence, and as the trees were desired more for ornament than for profit, I sent half of them in Lacinated walnut and the other half in the very species of walnut referred to by the Sonoma county paper, viz., "Vilmorin," a cross between the English and the black walnut, and which was originated in France years ago by French horticulturists and called after the leading member of the well-known seed firm of Vilmorin, Andrieux & Co., of Paris. I introduced this curious variety into this State some ten years ago and have been fruiting it for the last six years. In my catalogue of 1887-88 it is described as follows:

Vilmorin, or pear-shaped walnut: A cross between the English and French walnut; the nut has the shape of the English walnut or rather that of the Serotina, and the shell has the appearance and hardness of the black walnut; a very curious nut, but not desirable for market.

Two years ago, among a collection of ten or twelve grafted varieties of walnuts ordered for the Leland Stanford University and for the two experimental stations of the State University in Ione and Chino, I believe I sent each one a "Vilmorin" walnut; so I think that I am able to give the readers of the RURAL some information on that "rare species" of walnut, which has nothing precisely new about it and to which scientific societies of Europe have devoted but very little attention.

The "Vilmorin" is a cross between the *Juglans regia* or English walnut and the *Juglans nigra* or American black walnut. The leaves have the shape of the English walnut, but are of a lighter green; the wood is also of a lighter color. I grafted a large walnut in a conspicuous place on my own premises, two limbs into Cluster walnut and one limb each into Franquette, Mayette and "Vilmorin." The limb grafted into "Vilmorin" can be recognized at a glance, near or far from the tree, by the lighter color of its foliage; and a peculiarity of it is that in the fall the leaves on that limb are the first ones to turn yellow. The nut has taken the more or less oblong shape of the English walnut, with less furrows than the black and is quite hard, having to be cracked with a hammer. The color of the shell has also differed, for it is less black than its American parent, but much darker than the English. As to the meat it is of easier extraction than that of the black walnut, being confined in two small cavities in each shell, but it is less easy to extract than the meat of the English walnut. On the whole the cross between the two nuts may be regarded as a curiosity, but the nut has really no commercial value and I always recommended the trees simply as ornamental trees; in other words it is exactly with this crossbred walnut as it is with the mulatto, for if the latter might be considered as an improvement on the negro race, it certainly is not an improvement on the white race—this, be it said, with the greatest deference towards our late and lamented fellow-citizen, Fred Douglas.

I take pleasure in sending you a little box containing six samples of walnuts, viz: Two English, two black and two "Vilmorin," that is, the crossbred variety with its two parents, so that you can see for yourself and to show to any reader of the RURAL calling at your office the difference between the three nuts and also what that crossbred walnut, the "Vilmorin" is like. You will notice that a sample of the latter is more roundish than the other, having exactly the shape of a small *Præparturiens* walnut. The nuts on the same tree grow of the same shape as the two samples I send you, some more roundish and others quite oblong with sharp pointed ends. The hull falls off of itself from the nut, the same as with the English walnut.

Thus you will see that this new and rare species of walnut is neither new nor very desirable; that the nut has no commercial value whatever, and I believe that it is wrong on the part of the press of this State to praise to the skies varieties of nut or fruit that they know nothing about.

Speaking of hybridizing, I will say that it is a very nice occupation for those who have time to spare; thus we have seen florists originating by hybridizing and ad infinitum varieties of roses, azaleas and the like, of which we now have innumerable

varieties, as shown in florists' catalogues. But if hybridizing has been so successful with florists, it is a fact that the case has been very different with nuts and fruits, and the very best varieties of both have been and are yet originated simply from the seed.

FELIX GILLET.

Nevada City, Cal., April 1, 1895.

We are glad to have Mr. Gillet's statement about the Vilmorin walnut, but it does not of course signify that Mr. Burbank has the Vilmorin. We are personally aware that Mr. Burbank has just such a cross as is mentioned. We saw the original tree on his place more than ten years ago. What the trees are worth we do not pretend to say. We presume they are worth what any one will pay for them. More than that we have seen other walnuts which are apparently a cross between the black and the English walnuts. If we remember correctly, we saw them in the Winters region in 1888, perhaps at Mr. Wolf-skill's. There may of course be any number of such crosses if one takes the pains to make them or to watch for them when they come as chance seedlings. Apparently Mr. Gillet has a famous French one and Mr. Burbank a famous California one. Honors are easy.—ED. PRESS.

### Cultivation Not Enough.

TO THE EDITOR:—In the issue of your much valued paper dated March 30th, I see in a clipping from the *Visalia Delta* that Major C. J. Berry seems to think cultivation is all and everything needed to grow good fruit and plenty of it. Now, he leaves all the readers of this article at sea, because he has not stated what kind or kinds of fruit he grows. If he means citrus fruits, he is wide of the mark.

I will give the experiences of two of my neighbors whose places are side by side. I will call them A. and B. A. has about eighteen acres in oranges and lemons; B. has about fifteen acres. Both places were planted about fourteen years ago by the same man and about ten acres were planted on each place. Five years later there were about five acres more set on each place, and one year later A. set three acres more, so you will see that A. has eighteen and B. fifteen acres. As far as plowing and cultivating go, each place is well kept. The cultivator is never allowed to rust on either place, but it is here where the rub comes. A. spends about \$700 a year in various kinds of manures such as can be gathered up within a radius of fifteen miles, and he applies this to his trees every year. He plows well, cultivates well, irrigates well and attends to all the minor points as well. This year A. will ship, of his eighteen acres, twenty earloads of oranges, or 6000 boxes, and about three earloads of lemons. B. will ship about five earloads of oranges and about one earload of lemons.

I think this should show that there is more to be done than cultivate and cultivate again. This will do for corn, cotton and such like, but it will not do for an orchard to make it pay well, for B. takes as good care as A. does of his place, but B. never spent a dollar for manure of any kind and A. will tell you cheerfully that every dollar he spends in manure puts between three and four dollars in his pocket. Now, I know from experience that a number of things is necessary to grow good fruit of any kind—location, climate, soil, plowing, manuring, cultivating, picking at the proper time and, above all, careful packing after all the former necessary works are done well.

A. C. THOMSON.

Duarte, Los Angeles Co.

## THE POULTRY YARD.

### A Santa Cruz Egg Record.

TO THE EDITOR:—As I was driving by a market poultry ranch owned by Phillip Hynes I stopped to investigate, and Mr. Hynes showed me his egg record. He has 550 hens of different varieties, some White and Brown Leghorns, some Houdans and several crosses. I copied each day's gathering of eggs for last month, which is as follows:

| Day.    | No. Eggs. | Day.    | No. Eggs. | Day.    | No. Eggs. |
|---------|-----------|---------|-----------|---------|-----------|
| 1.....  | 356       | 11..... | 358       | 21..... | 357       |
| 2.....  | 371       | 12..... | 360       | 22..... | 370       |
| 3.....  | 367       | 13..... | 360       | 23..... | 320       |
| 4.....  | 382       | 14..... | 341       | 24..... | 366       |
| 5.....  | 354       | 15..... | 347       | 25..... | 384       |
| 6.....  | 365       | 16..... | 357       | 26..... | 324       |
| 7.....  | 375       | 17..... | 321       | 27..... | 350       |
| 8.....  | 375       | 18..... | 337       | 28..... | 362       |
| 9.....  | 355       | 19..... | 366       | 29..... | 340       |
| 10..... | 352       | 20..... | 326       | 30..... | 364       |
|         |           |         |           | 31..... | 372       |
| Totals. | 3652      |         | 3873      |         | 3909      |

This makes a grand total of 11,034 eggs for the month. In September he shipped twelve cases of eggs. Eleven cases shipped in October brought \$132; his feed bill for October was \$42.17, leaving \$89.83 profit for that month.

In November and December he shipped ten cases each month. These two were his small months.

Mr. Hynes says Brown Leghorns make the most

money for him. He is not a fancier, and he breeds only for the market. I could give interesting figures from some of my yards, but I am not advertising my stock in that manner. Mr. Hynes has not used an ounce of red pepper nor any egg food during the last six months, and says he considers them of no benefit.

Santa Cruz.

J. W. FORGEUS.

## THE STOCK YARD.

### Alfalfa in Kern County.

Henry Miller (of Miller & Lux), San Francisco.—Since 1871, we have gradually increased our acreage of alfalfa, until we now have about 20,000 acres. This is on reclaimed swamp and upland, under a complete system of irrigation, with the exception of a little light, loamy soil, with water near the surface and no irrigation. On the latter ground the plant is short-lived, on account of the gophers. The depth at which well water is found varies from ten to forty feet, and, with irrigation, it is immaterial whether the soil is naturally moist or dry. The preparation for seeding consists of deep plowing and cross plowing, and the depth of planting is not over two or three inches. For light, loamy soils, twelve pounds of seed to the acre is ample, while for hard, rough, new land, from sixteen to twenty pounds is required to insure a good stand. Seeding may be done here after the cold season, and when danger of heavy frost is past, but in time to take advantage of the spring rains, which are very essential. During the first season, the weeds should be mowed as they require it, without regard to returns of alfalfa, and after they are subdued it is well to let the first year's growth go to seed and allow it to be trampled into the soil by young stock, but if there is a full stand this is not necessary. We irrigate from streams, applying water as soon as spring opens and every time a crop is cut, the quantity of water needed depending on the quality of the soil. Drainage is very necessary, especially when irrigation is done in warm weather. After the first irrigation, less water is needed at an application than at first. Winterkilling seems to be effectually prevented by watering in the fall. Alfalfa will attain its best state in three or four years, and its condition after that will depend upon its treatment. We put stock on our land generally after the first and second growth is cut, and the only rest the land receives is when it is being irrigated. After hay has been cut for several years, we harrow in the spring with a heavy harrow or disc cutter, and take the opportunity to reseed that which shows lack of vigor. The more sun and the less shade there is, the better the growth and the more satisfactory the yield. We find it more difficult to get a stand than to get rid of it; but, in some instances, where we have wanted the land for orchard, vegetables, or root crops, we found several plowings would destroy it. Without irrigation, we have not found the crop very profitable but there are a few favored spots in the state where it can be grown without water; but when we plant we usually select such land as can be put under a perfect system of irrigation before using. Longevity of the plant depends on treatment and on the nature of the soil. On heavy "adobe" soil it will not live and thrive as long as on loamy soil; and on sandy, light soil it will be of short duration without constant and judicious irrigation. After the first season, we make two cuttings a year, and consider two tons to the acre each time a good yield. For hay, we cut when the first crop is moderately ripe—say nearly in full bloom; the second crop and any later ones are cut when the bloom first shows; otherwise the lower leaves will drop off. The first crop is generally preferable for seed, provided butterflies and other insects have not injured the bloom, as they often do. If the second crop is used for seed, it should ripen longer than the first. The crop for seed is mowed, windrowed as soon as possible, allowed to dry in that state, gathered with a hand fork, loaded on hay wagons, and put in stack as gently as possible. We find a good crop of seed a rare thing, but use the ordinary thrashing outfit, and turn out 800 to 1,000 pounds a day, in rare instances double that quantity, with a cost for thrashing and cleaning of about five cents a pound. The hay we never put in barns, but stack in small, narrow row ricks, to avoid danger of heating, endeavoring to get it in the rick as dry as possible, gathering in the forenoons to avoid shelling. When we use our own press and men, the cost of baling does not exceed one dollar per ton. The weight of the bale depends on the kind of a press used. An average, handy bale weighs about 150 to 175 pounds, and we never have any trouble about the hay keeping perfectly in bales of that size. The average price per ton for hay in our San Francisco market is about eight to ten dollars; of seed by the ton, eight to twelve and a half cents a pound, ten cents a pound being about the usual average price. For feeding farm animals, good, well-cured alfalfa hay is better than clover, but not quite so good as timothy. For milch stock, especially, we consider it fully as good as any other hay. We find but little difference between the straw and the hay, and while all stock like the straw better, there is no doubt that the hay contains the more nutriment. Like all rank growths, alfalfa will produce double under irrigation,



and the quantity will greatly overbalance any possible improvement in quality without irrigation, for I have found little difference between that grown by irrigation and under natural moisture. For horses, there is no pasture better than the alfalfa; for sheep and cattle, it sometimes works injury by way of bloat, caused by too rapid feeding, especially when there is dew, thin cattle and young stock being most liable. Cattle in high condition and cows suckling or well forward in calf do not bloat. As preventive of the bloat, hay should be kept in the pasture where the stock can run to it, and a good supply of salt in troughs to which they have constant access. The plant will not stand trampling by stock unless the surface of the ground be entirely dry, and we do not allow sheep or cattle on the fields during certain stages of growth nor during certain states of weather. We consider this pasture better than clover for swine, especially when the ground has a smooth surface, but if the soil is of a sandy nature, and allowed to dry, it is not so good. The capacity per acre depends on the nature of the soil, and the gain of weight made by the hogs depends on the breed and on the comfort they have. We can raise hogs on alfalfa, and by feeding them two months on grain (say barley, wheat, or Egyptian corn) they will average, when ten months old, 250 pounds, gross.

## THE FIELD.

### The Great Wheat Problem—No. 7.

California Growers Give Their Experience and Beliefs.

#### SAN BENITO COUNTY.

*George T. Elliott, Hollister.*—In giving the cost of raising wheat per bushel, I figured from the use of gang plows and headers—the implements in general use in our county—but if steam plows and combined harvesters could be used, the cost would be reduced. The following represents the cost of wheat per bushel, including interest on land:

|                                      |                                     |
|--------------------------------------|-------------------------------------|
| 10 bushels per acre, \$ .86½ per bu. | 25 bushels per acre, \$ .43 per bu. |
| 15 " " " .82 " "                     | 30 " " " .38 " "                    |
| 20 " " " .50 " "                     |                                     |

In my opinion, land in this county should yield twenty-five bushels per acre to make wheat growing fairly profitable at one cent per pound, and I should judge that not more than one-half now yields this amount.

For twenty years I had a butter dairy, and soon found that winter butter was most profitable. I experimented with several kinds of food and decided that one bushel of wheat ground with two bushels of barley gave the best results.

I do not believe it would pay growers here to feed a large proportion of their wheat to animals and market cattle and swine thus fattened. Eastern experiments favor this, but the price of meat there is higher than here. In my opinion, to ensure the grower warranted returns, he should cut it for hay and feed to cattle and sheep. If stockmen would never allow their stock to get low in flesh, their profits would be increased. I have found it so during my twenty years' experience.

Where land is so situated that it can be irrigated, stop raising wheat and raise some perennial forage plant, of which there are several kinds, the best of which for California at present being alfalfa, for when once seeded down, the cost is reduced to a minimum, and returns are much increased, for it makes a No. 1 pasture for all kinds of domestic animals, including poultry.

*James T. Gray, Hollister.*—I see no reason why wheat could not be fed profitably to Essex swine, providing the grinding can be done at home. With a good windmill this can be done. I would feed to swine only when grass or grain in the field is scarce. I would only feed to cattle after they have eaten the cream of the stubble field in the fall to round off, for horses do not like wheat as a grain.

It costs me to raise wheat per bushel in the sack, which includes seven per cent interest upon the value of land, as follows:

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| 10 bushels per acre, \$ .99 per bu. | 25 bushels per acre, \$ .51 per bu. |
| 15 " " " .70½ " "                   | 30 " " " .50 " "                    |
| 20 " " " .57½ " "                   |                                     |

Land in this county should yield twenty bushels per acre to make wheat growing profitable at one cent per pound.

*A. J. Clancy, Hollister.*—If the yield is ten bushels per acre, wheat costs me per bushel in the sack, including interest, etc., 60 cents; fifteen bushels, 55 cents; twenty bushels, 51 cents; twenty-five bushels, 48 cents; and thirty bushels, 45 cents. The average value of good wheat land is \$30 per acre.

In order to make wheat growing fairly profitable in this county at one cent per pound, land should yield from twenty-five to thirty bushels per acre, and I should judge about fifty per cent now yields this amount.

I have used wheat as food for horses and swine, and it is excellent used alone or mixed with other grain.

*W. H. Best, Hollister.*—The present price of wheat land in this county is \$45 per acre. Land should yield seventeen bushels per acre to make wheat

growing profitable at one cent per pound. I should judge about three-fourths of the wheat land in this county now yields this amount. Wheat costs me per bushel in the sack, including interest, etc., as follows:

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| 10 bushels per acre, \$ .84½ per bu. | 25 bushels per acre, \$ .38½ per bu. |
| 15 " " " .59 " "                     | 30 " " " .33 1-6 " "                 |
| 20 " " " .46 " "                     |                                      |

Wheat is as good as barley for swine if it is rolled and soaked, but is not as good as barley for horses and cattle. I think it would be more profitable for growers to feed a large proportion of their wheat to swine providing they can get three cents per pound. What is needed at this time is a division of the large tracts of land into small farms, and with more money in circulation we would not feel hard times as much.

*Thos. Flint, Hollister.*—Wheat costs me per bushel in the sack, including interest, etc., as follows:

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| Hills.                              | Valley.                              |
| 10 bushels per acre, \$ .46 per bu. | 10 bushels per acre, \$ .63½ per bu. |
| 15 " " " .34½ " "                   | 15 " " " .46 " "                     |
| 20 " " " .28½ " "                   | 20 " " " .37½ " "                    |
| 25 " " " .24½ " "                   | 25 " " " .31½ " "                    |
| 30 " " " .22 " "                    | 30 " " " .28 " "                     |

Land producing wheat at above cost is valued as follows: Hills, \$20 per acre; valley, \$40 per acre. In the use of wheat as food for animals, I always mix with barley for horse food when prices for both cereals are about equal and find it profitable when thus used.

#### SANTA CRUZ COUNTY.

*Ernest Werner, Watsonville.*—In this locality wheat-growing does not cut any figure, as the large ranches are around Salinas, King City and San Lucas.

I have had good results in feeding wheat to swine, and with hogs at four or five cents I think it would be more profitable for growers to feed a large proportion of their wheat.

In the Pajaro valley the land should yield fifty bushels per acre to make wheat-growing profitable at one cent per pound. A very small proportion now yields this amount.

The present value of land upon which wheat is produced is from \$150 to \$200 per acre.

*A. P. Rouché, Watsonville.*—Wheat costs me per bushel in the sack, which includes interest at seven per cent upon value of land, as follows:

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| 10 bushels per acre, \$1.36 per bu. | 25 bushels per acre, \$ .60½ per bu. |
| 15 " " " .84½ " "                   | 30 " " " .53 " "                     |
| 20 " " " .71½ " "                   |                                      |

The present value of land upon which wheat is raised at above cost is \$100 per acre. Less than one-third of the land in this county now produces 37½ bushels per acre, which would make the growing of wheat fairly profitable at one cent per pound.

I have had no experience in the use of wheat as feed, but I believe it would be excellent mixed with other grains, rolled or ground.

The only visible means by which farmers can make ends meet is a Government bounty on all staple agricultural products. The competition of newly developed wheat-producing countries, the cost of transportation to our none too numerous and distant markets, the worn condition of our wheat lands which now refuse to yield but little over one-half the former amount, the big wages for unskilled farm labor and the high price of fertilizers, which will not justify their use at present prices—all these causes render the outlook anything but satisfactory to the producer of this great staple. It is claimed by many that the low price is justified by the lessened cost of production, and while this claim may be a fair one in sections where vast areas are farmed by wealthy wheat kings and where much capital and expensive machinery are used, on ordinary farms and in the smaller valleys—at least in this valley—there is no reduction in cost, with the single exception of a reduction on twine and sacks which with the less yield makes no difference in the cost. We have to pay the regular \$2 per day for harvest hands and thirteen cents per 100 pounds for threshing. For freight to San Francisco—our only market, 100 miles distant—it costs us seventeen cents per 100 pounds, which amount would pay cost of transportation from San Francisco to Liverpool.

### Plums for Mr. Potter.

To THE EDITOR:—Referring to Mr. Edward E. Potter's tabulated statement of the various estimates of cost of growing wheat, I desire to say that I think his statement quite as unreliable as he seems to believe the various estimates to be. In his statement, he makes me say that the net cost of labor, seed, sacks, etc., is only 90 cents per acre of wheat. This amount is too absurdly small to be considered for a moment, even by a city farmer.

What I said (as published in the PRESS of February 23d) was that it cost me 65 cents per bushel to grow wheat. This estimate was based on a yield of twenty bushels per acre on land valued at \$80—twenty bushels at 65 cents, which amounts to \$13.

|                                      |         |
|--------------------------------------|---------|
| Net cost of labor, seed, sacks, etc. | \$ 6 28 |
| Interest on land.                    | 5 60    |
| Taxes on land.                       | 1 12    |
| Total                                | \$13 00 |

The present value of twenty bushels of wheat at this shipping point is \$8.76. After deducting \$6.28 for labor, seed, sacks, etc., and \$1.12 for taxes on

land, we have \$1.36 per acre left, or not quite 1½% on the above valuation of land. W. W. DURHAM.  
Durham, Cal.

#### COMMENTS BY A READER.

To THE EDITOR:—You might inform your correspondent, Mr. E. E. Potter, that in the world's market all estimates of wheat are made by bushel measurement. Hence I suppose the data collected was thus arranged so that the world's growers, buyers and speculators would readily understand the figures.

The land-value query was probably purposely submitted to show that values were out of all proportion to the uses to which land was put.

Mr. Potter shows his impracticability by suggesting in his third objection that a query should have been submitted asking for cost of cultivation; then, further on, he says none of the farmers can tell this. What would the results have been had we submitted impracticable questions? The reports have brought out exactly what was intended, to wit, irregularity of land values in growing the same product and the cost of from 90 cents to \$11.40 per acre are the points sought to be obtained, and more readily shows the producers their error in values, or, in other words, their losses in wheat growing upon the basis of value set on their lands. READER.

San Francisco, April 6th.

### Diversified Farming in California.

To THE EDITOR:—While I fully agree with "A Sacramento Farmer" as to the views expressed in your issue of April 6th, I would go still further than he does. The great need of California is small home-steads, instead of the large holdings which make their owners land-poor. What the State needs is not thousand-acre wheat fields, nor hundred-acre tracts planted to one variety of fruit, or vineyards of 500 acres, planted to raisin grapes, but small tracts of 10 to 40 acres, with a thrifty family on each, who will grow a variety of products, so that each can be cared for and utilized at its own proper time, bring the best price, and some income all the year round—always something to sell. I am glad to say that we have some of these around Napa already, and you will not hear their owners growl about hard times. Let me tell your readers how I would lay out such a farm, provided I could not buy one already established on a similar plan, in this county:

- 2 acres cherries, from early to late.
- 2 " apricots.
- 2 " peaches.
- 2 " prunes.
- 2 " plums, mostly Japans, for shipping.
- 2 " pears, late keeping varieties.
- 2 " apples, " "
- 2 " almonds.
- 4 " grapes.
- 1 " for vegetable garden, flowers and ornamentals.
- 4 " root crops, beets and carrots.
- 5 " pastures.
- 10 " hay, grain and alfalfa.

This comprises 40 acres, and will give a thrifty family enough to do all the year around, with perhaps a man or two additional, who would also be engaged all the year around, and find a home on such a place, instead of wandering around with blankets on shoulder, from place to place, and lead a dog's life. Such a place will afford scope to keep a few cows, the horses which are needed for work on the place, all the fowls and a few hogs; the latter, too, could be mostly kept from the products of the orchard, peeling and fallen fruit.

California is pre-eminently the place for homes in the true sense of the word. Its temperate climate,—not too cold in winter nor too warm in summer—the ease and facility with which a diversity of products can be grown, and all kinds of stock raised, and the healthfulness of its inhabitants, the number of working days throughout the year, when work is a pleasure instead of a burden, should make it so. But that labor must be judiciously divided over the year; as it can never be as long as the prevailing system of growing one or two specialties exists. It is the land of sunshine and flowers, and nowhere is afforded such a scope to do as much to make every home a representative one as here. But we must get rid of wild speculations in specialties; we must divide our energies over a whole year, instead of a few months—and as soon as this is attained we will be, or ought to be, a prosperous and happy people. We must profit from the lessons of the past, and let them be a guide for the future. They should show us what to do, and what not to do; and to accomplish all we are able to do, divide our immense tracts of unprofitable lands into smaller tracts, which, under the hands of industrious families from all parts of the world, will make a happy and prosperous community.

Napa, Cal.

GEORGE RUSMANN.

## THE DAIRY.

### Butter From Whey.

The term "whey butter," which has long been used to designate the grease which is skimmed from the whey tank at the cheese factory, does not describe the butter to be obtained from whey by the process recently devised at the experiment station



at Cornell University. From their experiments as detailed in their Bulletin No. 85, just issued, they have been able to secure 2.57 pounds of butter from each 1000 pounds of whey and that the whey has contained upon the average .25 of 1 per cent. of fat, showing that they have recovered in the form of butter nearly all the fat in the whey.

In only a few details does the manufacture of whey butter differ from ordinary butter making. On account of the small percentage of fat in the whey it was found to be impracticable to secure at one separation a cream thick enough for best results without churning it more or less in the centrifugal separator. In order to overcome this the whey was put through the separator in the same way milk would have been and about one-tenth the whole bulk taken from the cream outlet. This was found to contain on the average from 2 per cent to 5 per cent of fat or to be

of nearly the same fat content as ordinary milk. This so-called "first cream" was run through the separator a second time, and in this way the cream condensed to the proper consistency for churning.

In all of the experiments the whey was run through the separator immediately after it was drawn and before it had cooled down. It was at this stage, of course, slightly acid and the resulting cream was in good condition to churn at once after being reduced to the proper temperature. They had no difficulty, however, so far as the flavor of the butter was concerned in holding the whey 24 or even 48 hours in some cases, but recommend that the whey cream be churned as soon as convenient after separation. In one case where it was attempted to hold the whey 48 hours before separating the development of lactic acid went so far that the flavor of the butter was spoiled. The practical point seems to be that the

whey should be separated at once, and where possible the cream churned quickly, and preferably in any case the whey cream should not be held more than 24 hours.

The cream from the whey, containing as it does, very little casein, was very easily, quickly and completely churned at a low temperature. The most complete churning was obtained when the churn was started at a temperature from 48° F. to 54° F., the time required in most cases being less than 20 minutes.

In regard to the quality of butter, as before stated butter made from the whey has gone into the same market as the butter made in the ordinary way. Good judges who have seen the two kinds of butter side by side have been in some cases unable to detect which was made from whey and which from cream.



## Not too late to Plant.

Some people have just finished planting; others have but commenced; many have their garden planting yet to do; and all will be right if the Trees, Plants, Seeds, etc., are from the

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|                          |              |
|--------------------------|--------------|
| Mission, 3 years         | 5 to 6 feet. |
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| Manzanillo, 2 years      | 2 to 3 feet. |
| Nevadillo, 2 and 3 years | 4 to 6 feet. |
| Picholine, 2 years       | 2 to 3 feet. |

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## THE HOME CIRCLE.

### Two Christians.

Two Christians traveled down a road,  
Who viewed the world with different eyes;  
The one was pleased with earth's abode,  
The other longing for the skies.  
For one, the heavens were so blue,  
They filled his mind with fancies fond;  
The other's eyes kept piercing through  
Only for that which lies beyond.

For one, enchanting were the trees,  
The distance was divinely dim,  
The birds that fluttered on the breeze  
Nodded their pretty heads for him.  
The other scarcely saw the flowers,  
And never knew the trees were grand;  
He did but count the days and hours  
Till he might reach the promised land.

And one a little kind caress  
Would to a tender rapture move;  
He only opened his lips to bless  
The God who gave him things to love.  
The other journeyed on his way,  
Afraid to handle or to touch;  
He only ope'd his lips to pray  
He might not love a thing too much.

Which was the best? Decide who can?  
Yet why should we decide 'twixt them?  
We may approve the mournful man,  
Nor yet the joyful man condemn.  
He is a Christian who has found  
That earth, as well as heaven, is sweet;  
Nor less is he who, heaven bound,  
Has spurn'd the earth beneath his feet.

—Good Words.

### Duped by a Girl.

Texas might truly be called the  
"rogues' paradise" in 1850.

"Horse dealers"—to give them their  
own chosen title—gamblers and coun-  
terfeiters, to say nothing of villains of  
still blacker grades, were predominant,  
and as a general thing ruled matters  
with a high hand.

Situated near the bank of one of the  
confluents of the river Brazos were sev-  
eral farms, whose owners had chosen to  
settle together, the better to defend  
themselves and property.

Their most dreaded enemy and  
scourge of the country for miles around  
was a daring desperado known as Jack  
Wingrow.

Jack and his companions built a  
large, heavy loghouse, almost against a  
high bank of clay and sandstone, a few  
miles distant from the first settlers.

But, when the house appeared com-  
pleted, work still went on, night and  
day, the men working by relays.

And then, at the end of several  
months, the strangers threw off the  
mask and appeared in their true colors.

They helped themselves to such stock  
as they most fancied, and when one set-  
tler, James Agden, resisted, a pistol  
shot shattered his right arm and left  
him a cripple for life.

The outlaw band grew stronger and  
more bold as they encountered but  
little resistance.

But Wingrow, king as he was among  
his men, had to succumb at last, and  
what armed force could not do the  
bright eyes and pretty face of a maiden  
accomplished.

Mabel Craythorne was the only child  
of the richest stockgrower of the settle-  
ment. Her father had suffered severely  
by the marauding outlaws and was  
still suffering from a bad wound before  
he gave up in despair.

But one day Wingrow caught sight  
of Mabel, and he did not escape without  
injury.

Knowing that his life was safe while  
his men remained to avenge him, he  
boldly called at the house of old Cyrus  
Craythorne and made a proposal.

He offered to cease troubling the set-  
tlement and to protect them from other  
outlaws provided Mabel should become  
his wife.

The indignant reply of the old man  
did not abash him in the least, and he  
took his departure, saying that he would  
expect their answer in one month's  
time.

George Mable was only a poor herds-  
man of her father's, but he was true  
hearted and brave. They learned to  
love each other, but as yet it was a  
secret to the father.

George mustered up courage at the  
outlaw's threat and asked the hand of  
his employer's daughter.

As soon as his astonishment would  
permit Mr. Craythorne bade him be

gone, adding that if he would break up  
the band of desperadoes he might then  
renew his proposal.

The young folks managed to meet,  
and out of their despair grew a settled  
plan.

As a first move Mabel one day mount-  
ed her horse and rode down the creek.

When once beyond sight of the house,  
her animal's head was turned toward  
the hill, where stood the outlaw strong-  
hold.

Approaching it, she rode more slowly  
and nerved herself for the trial.

"Good mornin, miss," the outlaw  
bowed. "How's the family?"

"Quite well, thank you. Mr. Win-  
grow, I believe?"

"Yas: so you know me?"

"I saw you at our house not long  
since. But I'm very thirsty. Can you  
tell me where I can get some water?"

"That's some fresh in the shanty.  
I'll git it ef"—

"Oh, Mr. Wingrow, please let me go  
too! I've got such a curiosity to see  
what it is you keep so secret in there.  
Besides, I'm only a girl. I could not do  
you any harm if I would."

"I don't know. The men mightn't  
like it."

"You are master. Surely you do not  
care what they say? I don't believe  
you are afraid of what they think!"

"Jack Wingrow afraid! Not he! Let  
me help you to 'light."

While he placed her a chair and has-  
tened to fetch the water, Mabel took a  
survey of the rooms.

Her eyes dwelt long upon the door-  
way where Wingrow had disappeared.

This was apparently the entrance to  
an underground vault.

Then, hearing the steps of the outlaw  
returning, Mabel hastily picked up a  
tasty morocco belt from the mantel,  
containing a brace of richly mounted  
pistols.

"Oh, Mr. Wingrow, where did you  
get these? They're just what I've  
been wanting for so long! You must  
bring them over some time for father  
to buy for me—won't you?"

"Do you like 'em? Ef you do, they're  
yourn or anything else I've got," eager-  
ly replied Jack, and then, as Mabel  
hesitated, he clumsily buckled them  
around her waist.

From step to step she led the outlaw  
on until he repeated his offer, and Ma-  
bel hesitated—so admirably that a far  
more acute man than Wingrow would  
have been deceived.

"Well, I hardly know. Father has  
taken such a foolish dislike to you that  
I know he would not consent. I should  
dearly like such a life. Why, it would  
be equal to being a queen."

Gracefully effecting her escape, she  
rode slowly homeward, with a sicken-  
ing feeling of disgust, mingled with ex-  
ultation.

Day after day passed on, and while  
outwardly events pursued their usual  
course Mabel's plot was progressing  
rapidly.

Indeed it required all her skill and  
tact to keep Jack Wingrow in proper  
subjection.

But she was equal to the task, and  
once fairly started in the scheme she  
experienced a strange, wild pleasure in  
duping the infatuated outlaw.

George had taken his employer into  
their confidence and had selected sev-  
eral others whom he knew to be trust-  
worthy, and upon whose aid he relied  
at the moment of action.

The outlaw chief had at length per-  
suaded her, with great apparent diffi-  
culty, to consent to an elopement.

According to their plans, Jack Win-  
grow was to appoint himself as guard  
that particular night.

Only one man was needed, at any  
time, to act as such, for the cabin was  
so strongly built that an entrance could  
scarcely be effected by force even if un-  
defended.

But with half a score stout fellows at  
hand they could, as they thought,  
effectually defy any force that might be  
brought against them.

Mabel was to arrive about midnight  
and wrap lightly upon the door, Win-  
grow would open, and then, mounting  
their steeds, they were to leave the  
cabin to care for itself until their flight  
was discovered.

The appointed night came at length,  
and all was ready.

Mabel and George leading their five  
companions, fully armed and resolved  
to conquer at all risks, rode out from  
the settlement and proceeded toward  
the outlaw stronghold.

The men crept as close to the door as  
they dared to, crouching low down in  
the shade. Then Mabel advanced and  
gave the signal.

A low voice called her by name, and  
as she replied the door opened and Jack  
Wingrow emerged.

"Hist, don't make no noise. The men  
are all asleep. Let me"—and he strove  
to embrace the maiden, who avoided  
him and stepped back.

Like a hungry panther, George Mab-  
lie sprang forward.

Without a struggle Wingrow was  
thrown down and hastily bound and  
gagged.

Then the settlers noiselessly entered  
the cabin and lighted the lamps until  
all within was light as day.

The heavy slab door leading into the  
vault was partially closed and secured.  
Three men took their stations beside  
the entrance with clubbed rifles, while  
others stood with ready revolvers com-  
manding the doorway.

Then George set up a loud cry of  
"Fire!"

The desperadoes flocked to the en-  
trance, and one after another fell like

logs, while the young herder continued  
his cries.

A wagon was procured, and the  
prisoners were taken to the settlement,  
where the next day they were tried  
and condemned to death.

Mr. Craythorne was as good as his  
word, and a week after Mabel became  
the wife of—not the penniless herds-  
man, but the landed gentleman.—Bos-  
ton Globe.

### Historical.

The first sewing machine was pat-  
ented by Elias Howe, Jr., in 1846.

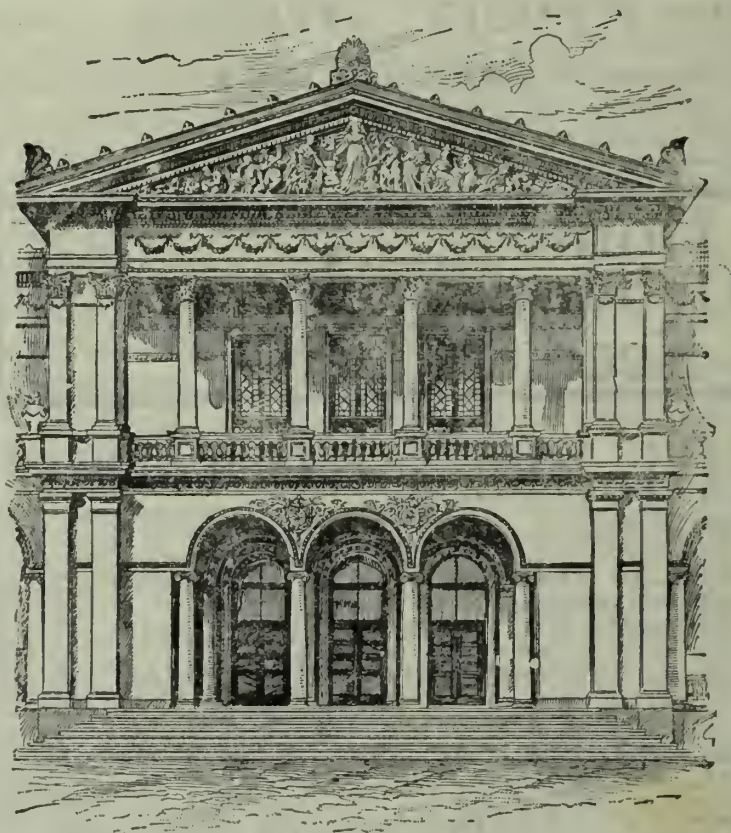
The first steam engine of this conti-  
nent was brought from England in 1753.

The national colors of the United  
States were adopted by Congress in  
1777.

In the battle of Marengo 58,000 men  
participated, and of that number 13,-  
000 were killed or wounded, about  
twenty-two per cent. Napoleon  
thought Marengo his greatest victory.  
He always kept throughout life the  
uniform he wore on that day.

The battle of the emperors was  
fought at Austerlitz, 1805. The emper-  
ors present were Napoleon, Francis of  
Austria and Alexander of Russia. Over  
170,000 men were actually engaged in  
the battle, and of this number 23,000  
were killed or wounded, or thirteen per  
cent of the whole.

## The Woman's Era.



### Within Her Sphere She Reigns Supreme.

Woman claims her own. Her field widens constantly.  
Every day brightens her prospects. Her progress fore-  
shadows the greater triumph at hand. Emancipation and  
equality will be hers in the years to come.

Prophetic of final victory were her achievements at the  
World's Fair. At her shrine there erected the nations bowed.  
The lesson taught at the "Woman's Building" will last "till  
time shall be no more." Their enlightening influence will  
be felt around the globe throughout the dawning century.

Only less memorable were the honors gained at the Fair by

## Dr. Price's Cream Baking Powder

The highest award conferred on this peerless prepara-  
tion, is a fitting accompaniment of the laurels won by the  
women of America.



## Fashion Notes.

Some fancy box-cloth jackets are made up with a sailor collar and lapels of white cloth fastened with large, white pearl buttons.

A very pretty collar for serge or cloth dresses is made by twisting together, one point over the other, two strips of waved braid.

Ladies are wearing white linen collars with colored shirts, precisely as gentlemen wear them. The cuffs, however, are of the colored cotton. The high, straight-standing collar is preferred in linen, but those turned over will also be worn.

Coats and jackets will be short and jaunty in style, mostly made in connection with the skirt to match, while underneath the jacket is worn the more than popular silk waist. Capes are worn and will continue to be worn as long as we retain the present style of sleeve.

There is an effort to introduce the sloping shoulder effect, which is only becoming to well-rounded figures. The latest Paris models show very long shoulder seams and a tendency to have the fullness of the sleeve spring from below the shoulder, but this style has naught to recommend it, save its novelty.

Rosettes of lace or ribbon are one of the little accessories of dress, and they appear on hats and capes, and on the waists, sleeves and skirts with great effect. A peach-colored satin evening gown is trimmed up the seams of the skirt on either side of the front with rosettes of pink crepon in graduated sizes.

The "skirt shirt" dress is again commended by tailors for plain wear in summer, whether made of percale, cotton cheviot, cotton duck, the various ginghams, zephyr and Madras, or else of colored linens. Shirt waists remain the same in shape and make, and will if possible, be even more popular than last year.

New neck scarfs, to be tied in soft bows at the throat, separately, or completing large Vandyke collarettes or collars are made of very sheer India crepe, silk net, plain and fancy chiffon in delicate tints in crepe and point d'esprit. They always finish with a bow and longer ends, sometimes falling to the foot of the skirt.

## Gems of Thought.

A man that studieth revenge keepeth his own wounds green, which otherwise would heal and do well.—Lord Bacon.

A man cannot possess anything that is better than a good woman, nor anything that is worse than a bad one.—Simond.

If thou canst not obtain a kindness which thou desirest, put a good face on it, show no discontent nor surliness; an hour may come when thy request may be granted.—Fuller.

Malice sucks up the greatest part of her own venom and poisons herself. Vice leaves repentance in the soul, like an ulcer in the flesh, which is always scratching and lacerating itself; for reason effaces all other griefs and sorrows, but it begets that of repentance, which is so much the more grievous by reason it springs within, as the cold or hot of fevers are more sharp than those that only strike upon the outward skin.—Montaigne.

A uniform principle, which is interwoven in my nature, and which has hitherto regulated, and I hope will continue to regulate, my conduct,—I mean an utter abhorrence of all kinds of public injustice and oppression,—the worst species of which are those which, being converted into maxims of state, and blending themselves with law and jurisprudence, corrupt the very fountains of all equity, and subvert all the purposes of government.—Burke.

COCKROACHES are never wittingly slain by Chinamen. They consider them sacred insects, and think it portends ill luck to step on them. As they never make any effort to exterminate them, the Chinese quarters are usually overrun with these pests.

## Damascus Tempering.

A manuscript lately discovered gives in detail the method employed in making the famous Damascus blades. The manner of tempering is something almost too horrible to relate: "Let the high dignitary furnish an Ethiop of fair frame," the description runs, "and let him be bound down, shoulders upward, upon the block of the god Bal-hal, his arms fastened underneath with thongs; a strap of goat skin over his back and wound twice around the block; his feet close together, lashed to a dowel of wood, and his head and neck projecting over and beyond the block. Then let the master workman, having cold hammered the blade to a smooth and thin edge, thrust it into the fire of cedar wood coals, in and out, the while reciting the prayer to the god Bal-hal, until the steel be of the color of the red of the rising sun when he comes up over the desert toward the east; and then with a quick motion pass the same from the heel thereof to the point six times through the most fleshy portion of the slave's back and thighs, when it shall have become the color of the purple of the king. Then, if with one swing and one stroke of the right arm of the master workman it sever the head of the slave from his body and display not a nick nor crack along the edge, and the blade may be bent round about the body of a man and break not, it shall be accepted as a perfect weapon, sacred to the service of the god Bal-hal, and the owner thereof may thrust it into a scabbard of ass's skin, brazen with brass, and hung to a girdle of camel's wool dyed in the royal purple."—Blacksmith and Wheelwright.

## Don't be Too Amiable.

The ordinary successful man is one who has managed to work up a little courage at a single point, in a single narrow province. So long as he has to do with brethren whose respective courages attach to other points, to other narrow provinces, he quite lords it. Thus one pale-faced little tailor can make nineteen out of every twenty of the strappingest fellows consent that they are admirably fitted in clothes that they know perfectly well both wrinkle and hump up. But set the sovereign tailor down in a courtroom, and a less aggressive man than he could not be found.

Through want of strength to front each other squarely we are sometimes led to grace our manners with amiability and consideration; and these, to be sure, are virtues in their way. But by the same want we have been led also into no end of cunning and dishonesty. Now, certainly, it were better to stiffen a little in neck and body than not stand stout on the legs. When a man's organism weakens to a point where you can scarcely distinguish between his bow and his wobble, it is high time for him to "brace up."—Scribner.

## Curious Facts.

The lowest sick rate in the English navy service in 1893 was on the south-east coast of the American station, and the highest on the China station.

It is said that there are millions of Chinese in the interior of China who are totally ignorant of the fact that a war has been going on with Japan.

The crossing of a buffalo with black Galway cattle has been successfully tested at Good Night, Tex., Gordon City, Kan., and Sioux City, Ia., and has proven so highly profitable that the raisers of this novel species are going into the business on an extensive scale.

The following are the nine longest words in the English language at the present writing:

Subconstitutionalist.  
Incomprehensibility.  
Philoprogenitiveness.  
Honorificabilitudinitas.  
Anthropophagarian.  
Disproportionableness.  
Velocipedestrianistical.  
Transsubstantiationableness.  
Proantitransubstantiationist.

## DOMESTIC ECONOMY.

## Hints to Housekeepers.

Try a long wire pie fork for taking pies from the oven.

Place a set of asbestos mats under saucepans to prevent the contents from scorching.

A holder may be so arranged that it may be fastened at the side of the dress from a long piece of tape, in the same way that a dressmaker ties on her scissors.

Another remedy for a burn that is so simple that it seems incredible that every one should not know it is equal parts of lime water and sweet oil mixed together, and applied as often as necessary to keep the burn moist and covered with it.

A wide shelf should be built behind the range on which to set the bread when rising, the batter for frying griddle cakes, salt and pepper for seasoning, the flour box for dredging, and various other things needed about the stove in cooking.

There are times when a simple thing in amateur surgery goes a great way toward easing pain. The materials for the operation are always close at hand. Under the shell of every egg there is a white, gelatinous film that is in itself a perfect skin. If the cut is not very large a piece of this film, fresh and wet, laid over the wound, will prevent soreness, and in a great measure hasten the growth of the new skin. The film adheres closely, keeps out all foreign matter, and draws the edges of the wound together. It will not come off easily, and another advantage that women will appreciate is that it does not show.

The conclusion that wheat bread is unfit for dyspeptics, sometimes jumped at because ill effects are noticed to follow its use, is erroneous. On the contrary, it has been pointed out by Bouchard and others that farinaceous food is peculiarly adapted to some dyspeptic patients. It is the microbes is the starch, which is capable of producing irritating acids, that cause the trouble. To avoid this, Bouchard recommends that only the crust or toasted crumbs of bread be used by dyspeptics, particularly those whose stomachs are dilated. The reason for this is explained by the fact that baking temporarily, though not permanently, arrests the fermentation of dough. When it is again heated by the warmth of the stomach the fermentation is renewed. In cases where the bread is toasted brown through the fermentation is stopped permanently.

## How to Tell Fresh Fish.

The rule given by Dr. Mary Green, at the pure food exposition, is one every housekeeper should know, as in localities at a distance from water fish are very apt to be kept longer than is proper when used for food. In using fish Dr. Green said that it was absolutely necessary to know that they were fresh. Fish that are not fresh, said she, generate a poison in the system that may lead to serious sickness and skin diseases. In purchasing fish she said it was a good plan to see that the flesh was firm. If an indentation made by the finger remained the article should never be used. It was also a good plan to see that the eyes were plump and the gills red. These latter tests were not, however, infallible for the reason that when fish get old the dealers cut their heads off, and some of them paint the gills so

dexterously that the purchaser might easily be deceived.

Pursuing the lecture to shell fish, Dr. Green said that oysters were the most easily digested when eaten raw. Cooking did not improve their flavor while it did detract from their digestibility, and she quoted from a physician who said that an oyster that had been cooked too long was almost wholly indigestible. She claimed that turtle is not a hygienic food at all, notwithstanding that its praises have been sung for ages. Lobsters, she said, should always be boiled alive.

## Domestic Hints.

WINE WHEY.—To a pint of milk put two glasses of wine; mix it, and let it stand twelve minutes, then strain it through a muslin bag or a very fine sieve. Sweeten it with loaf sugar. If the whey is desired weaker add a little hot water to the milk.

CORN CAKE.—One cup of yellow corn meal, one cup of wheat flour, one cup of sugar, one cup of sour cream or one cup of milk, and three tablespoonfuls of cream of tartar and half a teaspoonful of soda, a teaspoonful of salt, two unbeaten eggs. Bake twenty minutes.

GERMANS.—Melt two ounces of butter in half a pint of cream which has been slightly warmed and allowed to cool, beat into this two ounces of flour, and the same of powdered sugar, add the yolks of four eggs, well beaten, and lastly the whites of three eggs beaten to a stiff froth. Flavor with one teaspoonful of orange water and beat well. Half fill small buttered cups with the mixture, and bake thirty minutes. Sift sugar over them and serve hot.

SQUASH PIE.—One pint of sifted squash, one quart of scalded milk, two cups of sugar, four eggs, a teaspoonful of salt, a little lemon juice, half a teaspoonful each of ginger and cinnamon and a dessertspoonful of butter melted in the hot milk. To mix it stir the salt and spice into the strained squash first, then add sugar and lemon juice, and when these are mixed pour in half the milk, and when this is well stirred add the remainder, and lastly the eggs, which should be thoroughly beaten. Line a pie plate with paste, put on a rim and fill with the squash mixture. Bake about forty minutes. The sifted squash should be dry and mealy, not watery. Cook the squash in a little water, or, better still, steam it.

BAKED VEAL.—Take two or three slices of veal steak, put them into a bake pan, cover rather thickly with fine bread crumbs and season with salt, pepper and a very little mace. Lay two or three thin slices of salt pork on the top of each steak and put one or two slices on the bottom of the pan; pour in about a cupful of warm water, and if convenient drop in a sprig or two of parsley. Bake until tender, basting every fifteen minutes. Add a little hot water as the water in the pan boils away, leaving enough for gravy. When done, place the steaks on hot a platter to keep warm while you make the gravy. Cook one scant tablespoonful of flour in one tablespoonful of hot butter till smooth and brown, add a little hot water to the gravy in the pan, scrape the sides and bottom of the pan carefully, to remove all the browned parts. Strain this gradually into the butter and flour, stirring constantly. add the juice of half a lemon, and season with pepper and salt. Turn the gravy over the steaks and serve at once. This is an inexpensive dish, but if carefully prepared will be found very palatable.

Highest of all in Leavening Power.—Latest U. S. Gov't Report

**Royal Baking Powder**  
ABSOLUTELY PURE



## Patrons of Husbandry.

### Why Dixon Grange Died.

The region contiguous to Dixon, Solano county, is one of the best farming districts in California. The soil is fertile and alike suitable for grain growing, horticulture and miscellaneous farming. The climate is the best California sort: the water supply is abundant and unfailing; the markets of San Francisco are conveniently near and the means of transportation (rail and water) are all that could be desired. It is, indeed, a favored country; and it is blessed not only by the bounty of nature, but as well by the industry of man. It was among the first districts of central California to be settled by Americans, and it has been for forty years past a seat of rural industry, conspicuous for the prosperity and enlightenment of its people. In the long ago it was one of the first to substitute systematic farming for stock raising; and now—again adapting its energies to the demands of the times—it is rapidly taking on the character of a fruit country.

Within this district there is a registered voting list of 612 persons, and it is estimated that the total population is upwards of 5000. And there is not a pauper nor an idler in the lot. Nobody is so rich that he may live without work nor anybody so poor as to be unable to help himself. In the town of Dixon, purely a local center, whose existence is based upon serving the surrounding country, there are about 700 people. The annual shipments of grain from its warehouses aggregate between 10,000 and 12,000 tons, and there are other shipments from Tremont and Batavia, drawn from the same district. Shipments of dried fruits aggregate 500 tons per year, and not the half of the acreage planted to trees is as yet in bearing. Miscellaneous shipments are in proportion; they are made up of honey, beehives, hogs, hides, wool, vegetables, dairy products, fresh fruits and the whole list of domestic commodities of rural production.

Although these facts are very familiar, I have thus run over them that whoever reads this may be freshly minded of the importance of the county and of the industrial character of its people. It is fairly illustrative of the best conditions which prevail in our California rural life. But—fellow Patrons, I address myself especially to you—the Grange has no part in the life of this community. Twice in Dixon the Grange was put upon its feet, and twice it died; and now I am told it is dead beyond the hope of resurrection. Why this should be so—why it is that an Order planned to promote the interests of country life and industry, and elsewhere successfully doing it, should utterly fail to hold itself together in such a community as this—is a fact requiring explanation. I spent last Saturday in and about Dixon and made it a special business to study the why and the wherefore of this anomaly. I talked with Mr. Henry, the very intelligent editor of the *Dixon Tribune*, whose acquaintance with local affairs is exceptionally good, with Mr. W. J. McElwaine, a well-known farmer, who assured me that so long as the Grange contrived to live he never missed a meeting, with Mr. James Millar, who was identified with the attempt to revive the Grange two or three years ago, with Mr. J. S. Mayes, a steadfast lover of the Order, with Mr. Agee and many others; and it was all pretty much the same story—the Grange died because it did nothing. Mr. Mayes was among the original founders of the Order twenty years back when Dixon Grange started out with upwards of one hundred members, and at once took a leading place among the public activities of the time. The best men in the country joined it, he said, and it made a new era in the life of the community. Out of it grew a business organization which for some two or three seasons did the bulk of the buying for the Dixon farmers and through which a very large percentage upon the price

of machinery and other supplies was saved. Again, there grew out of it a warehouse project which enabled the farmers to hold their grain at home, subject to their own control until such time as they chose to sell. After this came the great deal with Morgan's Sons and the losses involved in the collapse of that firm. This impoverished some and disheartened others, and resulted in the loss of a good share of the Grange membership.

But discriminating people who saw that the Grange was in no way responsible for the Morgan disaster, and who recognized in it an agency of wide usefulness, stuck by the Order. A goodly band was left and it held faithfully together for many years, gaining much that was felt to be of value; but little new blood came in, the proceedings degenerated to a dull routine, and finally the meetings ceased altogether. About three years ago there was a strong pull for revival, aided by State Master Davis and others, and Dixon Grange again got on its feet; but it had no head, no purpose and no plan, and after dragging on a useless existence it failed again. Mr. Mayes has no hope of its revival. He told me that the Order absolutely commanded his affections; that it had been of great service to the community, especially in social ways; but that somehow it lacked the life to hold itself together. "The main trouble," he declared, "was that it didn't seem to take hold of anything of practical value to the farmers."

Mr. Millar was among those who came into Dixon Grange at the time of its revival three years ago, and his whole experience in the Order has been in recent times. I liked the idea, he said, and readily went into it, thinking that many advantages might follow occasional meetings of our people. Well, they did nothing but go through a grind of ceremonies which grew tiresome enough after a little while. When I come to town it is for some purpose and my time is valuable; and I soon found I was wasting it in attendance upon the Grange. Nobody seemed disposed to take up any live project whether for practical action or for discussion, and of course it soon got to be of no interest or value to me. For some reason, he went on, the Grange didn't get hold of the live men of the community; it didn't get hold of any scheme to do anything. It was of less practical value than a sewing society and of course had no attraction for men of affairs. And yet, he said, it does seem strange that farmers can't organize and combine like other sorts of men for mutual action and advantage. The Grange seems in its plan well adapted to the farmers' wants and if it had practical and energetic management, I believe it could be made to go in great shape.

Mr. Agee, like Mr. Mayes, belonged to the old guard and his affection for the Order has survived its misfortunes. He confirmed what the others had said. The great need with us, he said, was a plan of action and somebody to push it. But we had nothing and could get nothing, and so the Grange died a natural death. I believe it could have held up if it could have commanded the regular and interested attention of two or three men, but the private business of one or another of us stood in the way, no young blood came to the front and it couldn't be kept up without an effort which it seemed no use to make. I suppose even now, he continued, the Grange might be made a power if it could command generalship and take up schemes worth the while of farmers generally. But I fear not; I fear that here, at least, its day is past.

This was the story everywhere. Dixon Grange, like the old man in the old story, "just died naturally from want of breath." The community was as large as before, it was vital as before, its interests were purely rural as before; but the Grange did nothing to serve the community and, of course, the community ceased to support it. No organization, be it social, fraternal, business or religious, has the right to live when it has ceased to be useful.

To be useful—to be of service—is the law of all legitimate life.

Now, we all know there are a good many Granges in the California jurisdiction in the fix Dixon Grange was in in its later years. They have ceased to attract the vital elements of community life. Their membership is a handful of faithful old people who meet only to talk of the past and to go through ceremonies dear from association but pointless so far as practical value is concerned. Many of them have ceased to meet regularly or at all, and are maintained in good standing—in a sort of fraternal "pickle," so to speak—through the affectionate providence of some well-to-do brother. There are many such, and if anybody doubts it, let him ask Brothers Webster, Loucks, Logan and others how it fares with their Granges and how their dues are paid. And even in those Granges which pretend to keep alive, there are—outside of a half dozen—scarcely any which are really alive. When an official inspector, after due notice of his coming and after personally visiting a large share of the membership, still finds it impossible in one place or another, to get together a sufficient number of people to fill the chairs, it is time to ask if the life of some of our nominally live Granges is not ebbing away? There never was a truer thing than that uttered by Mr. Walton of the Executive Committee four months ago in his letter to leading members of the Order. He said:

As the situation in the Grange field of labor in this State is constantly becoming more and still more serious, it seems the part of wisdom for the friends of the Order, especially those whose experience has pointed out to them the great possibilities of such an organization when once permanently established on lines that will enable it to keep pace with the changing conditions that time, growth and experience naturally bring about. \* \* \* The fact is, the order is going to pieces for the want of some practical work to keep the membership actively employed in bettering their condition. The Grange at present is doing absolutely nothing to help the average farmer in this time of uncertainty and sore distress.

When things are in this fix it is not a time to quarrel and bicker and dispute about personalities and vanities; but a time to work together to a common purpose. It is time to quit the policy of do-nothing, to give up dependence upon peevish and senile sentimentalism and to go bravely to work. The organization, though greatly weakened, is still intact: is still supported by the affections of a multitude of good people; it stands in its purposes still far ahead of all other similar associations; it has in its ranks men capable of directing it to new and vital courses. All that is needed is to put at the front of Grange affairs—in its leading officers—men of vigor and force. Give the Grange LEADERSHIP and its rank and file will do the rest.

A. H.

### Yuba City Grange and Surroundings.

TO THE EDITOR:—As I had heard so much talk that the Inspector would visit Yuba City Grange on April 6th, I thought it best to go to get that lukewarmness washed away, as there was a spark of Grange life left in me. The industrious Matrons had the hall in fine order, decorated with beautiful bouquets. Old and young wore smiles of contentment and joy. Here was the silver-haired Master and many others; even our Worthy State Deputy Frisbie rushed off from Los Angeles to be with us. He had taught this Grange many lessons, and did not want the Inspector to take undue advantage of his absence. The hall was well filled—mostly those in younger walks of life, with sufficient number of older ones to make a pleasant and agreeable audience. Master Bunce performed his duties in a creditable manner. An excellent literary programme was prepared by our worthy Secretary, Miss Green. By the way, in conferring the degrees she was not as green as her name appears. She set a good example for all. First on this programme was Sister Frisbie and

others, who entertained the Grange and Inspector with a literary feast. Little time was given to speech-making, which we regretted, as we wanted to hear from the Inspector and thereby become polished—yes, to rub the rust off; yet we hope to be kept awake now.

The coming of the Inspector had a tendency to bring many out who we were glad to meet. In this Grange we have two State Deputies, one County Deputy, the chairman of the State Grange Executive Committee, Bro. B. F. Walton, and the efficient and faithful Assistant Steward of the State Grange, who also is Gatekeeper of this Grange. We are informed by the Inspector that a stronger feeling now exists in the interest of our Order. Many are striving to do what they can for the farmer, his home and his fire-side. In looking over this Grange, we find many of our earnest and best citizens belonging to it. Among them, to begin with the older ones, I would mention Geo. Ohleyer, who for twenty years has been identified with the Order, who also has made a name by his ever-earnest and faithful work against the hydraulic miners, who had destroyed many beautiful ranches in this fertile valley. He became a leader, and led the fight against the hydraulic miners into the courts, where at last he won for the tillers of the soil a victory which is a monument that will stand long after the marble will have crumbled to dust. Through his labors this valley has become one of the very best in California.

The inspector says that in all his travels in California he has seen no county that has more well-kept farms, with large two-story houses and magnificent barns, than there is in Sutter county. Brother Bunce, our honored master, has a beautiful home, with fruits of all kinds and with a lawn that is the pride of the neighborhood. Near by is the home of that thorough business man, Brother B. F. Walton. The fences are straight and well kept, no trash is allowed to grow; the fields are deeply and nicely plowed; there is a good dairy, and also 100 acres seeded to alfalfa. This spring he set out eighty acres to fruit. Our able brother is foremost in agriculture and has done as much as any one to bring co-operation to an issue among the fruit-growers and farmers. The 200-acre ranch of Judge Stabler is near Yuba City. It is planted to fruit and is most all in bearing. Mr. Stabler's ranch is under the supervision of his son Harry, who is a real student and has his work right before him at all times. It is a fact that no man knows more about the

## Health Restored

ALL RUN DOWN  
No Strength nor Energy  
Miserable  
IN THE  
EXTREME.  
Hands  
COVERED  
—with—  
SORES.

CURED BY USING  
Ayer's Sarsaparilla

"Several years ago, my blood was in bad condition, my system all run down, and my general health very much impaired. My hands were covered with large sores, discharging all the time. I had no strength nor energy and my feelings were miserable in the extreme. At last, I commenced taking Ayer's Sarsaparilla and soon noticed a change for the better. My appetite returned and with it, renewed strength. Encouraged by these results, I kept on taking the Sarsaparilla, till I had used six bottles, and my health was restored."—A. A. TOWNS, prop. Harris House, Thompson, N. Dak.

Ayer's Sarsaparilla

Admitted  
AT THE WORLD'S FAIR



condition of the fruits of California than Mr. Stabler, who is not a member of our Order, but should be. Aunt Betsy will have to send the inspector to see him. Near this fine orchard is the place of Mrs. Starr, another member of our Order. Too much cannot be said of her orchard; it is the equal of any in the district. Next to this is a large tract of eighty-five acres in peas for the cannery. The cannery and packing-house are managed by Brother Pratt. In short, this section of Sutter county is rich and well cared for—none better can be found in the State. Much of this prestige is due to the Grange. Brother Shoemaker says that the people here are as much advanced in all the respectable walks of life as they are in the East.

AUNT BETSY.

In handling heavy machinery it is necessary to take every possible advantage. If three sticks of timber can be procured and set up at an angle, with the upper ends lashed tightly together, a support is thus formed for the hoisting tackle, with which almost any machine can be quickly unloaded from wagon or railroad car. Sometimes two sticks of timber are available when three cannot be had. The two may then be lashed together and erected, being held in place by two guy ropes. Sometimes even two sticks cannot be had and the work must be done with one. When reduced to the use of a single mast at least three, and better four, guy ropes are necessary. The guys may be quickly tightened by the use of a small rope tackle, and when once in place, machines can be easily handled by a heavy tackle suspended from the top of the mast.

In the great majority of cases it pays to do things the best you are capable of, regardless of the expense of time and material required. The mechanic often meets with conditions under which he is tempted to "rush things" to a degree which forbids anything but the shabbiest work. It may seem at the time that the circumstances justify it, but he generally finds afterwards, if he has yielded to the temptation, that palpable loss resulted from his haste. The circumstances are rare which really recommend makeshift work. The mere fact that a man has underestimated the price of a piece of work, or the time in which it could be finished, is of itself no reason for shoddy execution—in nine cases out of ten.

#### Farmers' Guide.

This is the title of a new book which has just been issued by the German Kali Works. The main portion of the publication comprises an enumeration of most farm crops and horticultural crops raised in this country from the Gulf of Mexico to the Canada border, setting forth briefly upon what kind of soil these crops should be planted, what place they should have in their rotation with other crops and what kind of fertilizers should be applied to them, together with the average amounts per acre. A few valuable suggestions are also given with each crop.

As an introduction to the pamphlet, the principles of artificial fertilization are presented in a concise manner, embodying just such information as every practical farmer and consumer of artificial manures will seek. In connection therewith, the average composition of fertilizer materials is given, and some valuable tables are appended showing the distances recommended for planting various crops and the number of plants per acre at various distances.

In the set of illustrations which conclude the pamphlet the results of practical and scientific experiments illustrating the use and effect of artificial fertilizers are given.

We understand that this book, valuable as it is, is a donation to the American public, and can be obtained free of any cost by writing to the German Kali Works, 93 Nassau St., New York.

#### Their Mammoth Nurseries.

Messrs. Storrs & Harrison have reason to be proud of their Painesville Nurseries, which extend for more than a mile along the shore of Lake Erie, two miles east of Painesville, Ohio. Thirty-two years ago the Painesville Nurseries consisted of a few acres cultivated for a local retail trade. Now they occupy over 1200 acres, have twenty-nine large green-houses and the largest storage and packing cellars in the country. Probably no nurseries in the United States are so well situated or have the variety of soil so admirably adapted to the production of hardy, healthy, well-rooted and well-developed specimens of such an immense variety of fruits and ornamental trees, shrubs and plants. They have recently issued a new and handsome catalogue, which can be secured by addressing Storrs & Harrison, Painesville, Ohio.

—For the first time a carload of flowers was, on the 3rd inst., shipped to the East by freight from Los Angeles, via the Santa Fe, to Chicago, where the blossoms will be used in Easter celebrations. The shipment will make the trip in six days, going on a fast fruit train. The shipment comprises, among other items, one of 30,000 Calla lilies and several thousand carnations. Lilies can be landed in Chicago for between \$6 and \$7 per thousand and will bring \$50.

#### How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligation made by his firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O. WARDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75c. per bottle. Sold by all Druggists. Testimonials free.

—Preparations for the opening of the Columbia river salmon-packing season are complete. On April 10th nearly every cannery on the Columbia river from The Dalles to Astoria will present a scene of activity. Packers generally are anticipating a good run of fish, and, as the market demand is steady at last year's prices, they are ready to stow away every chinook that can be had. The season will open with a rush, and the rush will continue right through the next three months.

## To Orange-Growers.

The largest crop and best grade of fruit can only be obtained by using fertilizers containing

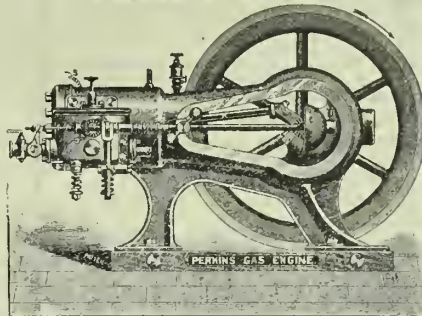
Not Less than 12% Actual Potash, (K<sub>2</sub>O)

This is equally true of pine-apples and other tropical fruits.

Our books on Potash are sent free. They will cost you nothing to read, and will save you dollars

GERMAN KALI WORKS, 93 Nassau Street, New York

MEYER, WILSON & CO., 210 Battery Street, San Francisco. Sole Agents for the Pacific Coast.



If you want Power or Pumps

Investigate the

PERKINS

GAS, GASOLINE or OIL ENGINES,

Also PUMPING MACHINERY.

Prices, according to capacity, \$30 and upwards. Give full particulars for close estimates. Write for catalogue.

PERKINS PUMP & ENGINE CO.,

117 Main St., San Francisco.

If It's a Sprain, Strain, or Bruise

St. Jacobs Oil

Will Cure It



WAUKEGAN CHIEF.



WAUKEGAN  
BARBED WIRE.

Weight per Rod,  
Not Price per Pound,  
Makes the Cheap Fence.

100 Rods of Waukegan  
Weigh only 90 Pounds.

WASHBURN & MOEN MFG. CO.

SOLE MANUFACTURERS.

San Francisco Office and Warehouse:

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FRANK L. BROWN, Pacific Coast Agt.

Cover Your Barns,

OUTHOUSES, SHEDS AND DWELLINGS WITH  
P. & B. ROOFING.

FOR FENCE POSTS, WATER TANKS, ROOFS, WOOD OR IRON,  
P. & B. PAINT.

FOR POULTRY HOUSES, CREAMERIES, FLOORS AND WALLS,  
P. & B. SHEATHING PAPER.

Highest Awards at Chicago, 1893, San Francisco, 1894.

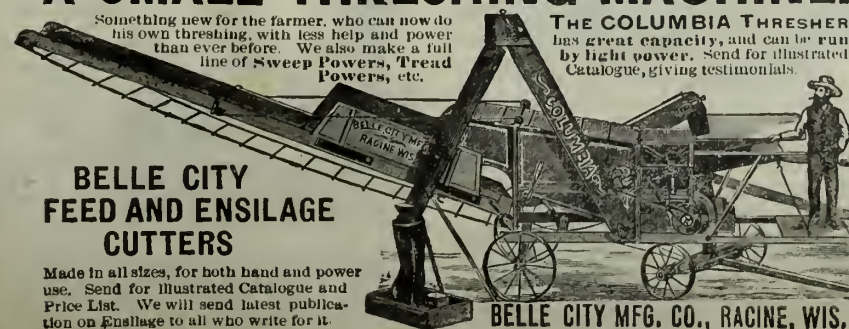
PARAFFINE PAINT CO.,

221 South Broadway, 116 BATTERY STREET, No. 49 First Street,  
LOS ANGELES. SAN FRANCISCO. PORTLAND, OR.

A SMALL THRESHING MACHINE.

Something new for the farmer, who can now do his own threshing, with less help and power than ever before. We also make a full line of Sweep Powers, Tread Powers, etc.

THE COLUMBIA THRESHER has great capacity, and can be run by light power. Send for illustrated Catalogue, giving testimonials.



BELLE CITY  
FEED AND ENSILAGE  
CUTTERS

Made in all sizes, for both hand and power use. Send for Illustrated Catalogue and Price List. We will send latest publication on Ensilage to all who write for it.

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THE  
OWEN  
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BELT



Trade Mark—Dr. A. Owen

FOR MEN AND WOMEN

The latest and only scientific and practical Electric Belt made, for general use, producing a genuine current of Electricity, for the cure of disease, that can be readily felt and regulated both in quantity and power, and applied to any part of the body. It can be worn at any time during working hours or sleep, and

WILL POSITIVELY CURE

RHEUMATISM  
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LAME BACK  
NERVOUS DISEASES  
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AND FUNCTIONAL  
DERANGEMENTS



WITHOUT MEDICINE

Electricity, properly applied, is fast taking the place of drugs for all Nervous, Rheumatic, Kidney and Urinary Troubles, and will effect cures in seemingly hopeless cases where every other known means has failed.

Any sluggish, weak or diseased organ may by this means be roused to healthy activity before it is too late.

Leading medical men use and recommend the Owen Belt in their practice.

OUR LARGE ILLUSTRATED CATALOGUE

Contains fullest information regarding the cure of acute, chronic and nervous diseases, prices, and how to order, in English, German, Swedish and Norwegian languages, will be mailed, upon application, to any address for 6 cents postage.

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MAIN OFFICE AND ONLY FACTORY,

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CHICAGO, ILL.

The Largest Electric Belt Establishment in the World

MENTION THIS PAPER.



WHAT'S THE  
MATTER?  
FARM  
COVERED  
WITH STUMPS.



Works on either Standing Timber or Stumps. Pulls an ordinary Grub in one and a half minutes. Makes a clean sweep of two acres at a sitting. A man, a boy and a horse can operate it. No heavy chains or rods to handle. The crop on a few acres the first year will pay for the machine. You can not longer afford to pay taxes on unproductive timber land. Clear it, raise a bountiful crop with less labor and regenerate your old worn out land by pasturing. It will only cost you a postal card to send for an illustrated Catalogue, giving price, terms and testimonials. Also full information concerning our L. A. L. Grubber, Iron Giant Grub and Stump Machine, Two Horse Hawkeye and other appliances for clearing timber and. Address  
HAWKEYE MANUFACTURING CO., 641 8th St., Monmouth, Ill.  
Summerville Shelland Pony Farm. For catalogue address Millie Bros. at above office and number. Breeders of Pure Shelland Ponies.



## Parts That Do Not Grow Old.

In his work on the senile heart Dr. Balfour tells us that there are two parts of the human organism which, if wisely used, "largely escape senile failure." These two are the brain and the heart. Persons who think have often wondered why brain workers, great statesmen, and others, should continue to work with almost unimpaired mental activity and energy up to a period when most of the organs and functions of the body are in a condition of advanced senile decay. There is a physiological reason for this, and Dr. Balfour tells us what it is. The normal brain, he affirms, "remains vigorous to the last," and that "because its nutrition is specially provided for." About middle life, or a little later, the general arteries of the body begin to lose their elasticity and to slowly but surely dilate. They become, therefore, much less efficient carriers of the nutrient blood to the capillary areas. But this is not the case with the internal carotids, which supply the capillary areas of the brain. On the contrary, those large vessels "continue to retain their pristine elasticity, so that the blood pressure remains normally higher than within the capillary area of any other organ in the body. The cerebral blood paths being thus kept open, the brain tissue is kept better nourished than the other tissues of the body." Who is there among those who have reached or passed middle age that will not be rejoiced to find such admirable physiological warrant for the belief that the brain may continue to work, and even to improve, almost to the very last hour of life?

A new steamer line from Portland to Japan is announced. The O. R. and N. Co. have an agreement with Samuels, Samuel & Co., of Yokohama, and others, to place two steamers on the route, making monthly trips. The first steamer leaves Hong Kong the 1st of May. The first steamer leaves Portland June 1st. All steamers will run via Yokohama and during the winter months via Honolulu. The vessels are to have a carrying capacity of from 3000 to 5500 tons. The line is to be operated in connection with the O. R. and N. Co. exclusively.

## Get a Good Article for Economy.

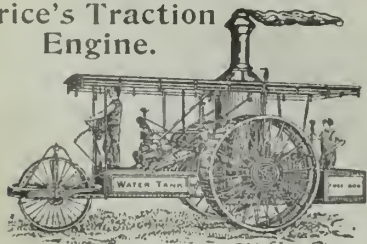
If it is poor economy to buy cheap clothing, cheap tools, cheap labor, etc., as has been proven time and again, it is still poorer economy, combined with much tribulation both mental and physical, to buy a so-called cheap bicycle. Get a first-class high-grade wheel at a reasonable price and save yourself vexation of spirit and the ever-recurring bills for repairs that go with the cheaper sort. The Marion Cycle Co.'s catalogue will tell you about the very latest improvements in bicycle details, and will show why it's cheaper to buy a good wheel in the first place. It will be mailed to you free by sending to O. S. Potter, the Pacific coast agent, 48 Fremont St., San Francisco.

## Horse Owners! Try GOMBAULT'S Caustic Balsam



A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland O.

## Price's Traction Engine.



We have one of these engines that was used about one month last season and was taken back by us by reason of illness of purchaser. Engine is in perfect order, and in better working order than when first sent from the factory. A BARGAIN. Indicated power, 80-horse; Cylinders, 8x8; Wheels, 8 ft. high, 28 in. wide; weight, less than 10 tons. Price when new, \$4500.

HOOKER & CO.,

16 and 18 Drumm Street, San Francisco.

**WHAT WE SAY WE DO WE DO DO**

The things we forget!

What untold mischief these do cause us all!

Perhaps you have a half-formed notion of buying a binder, reaper or mower—and it's not a McCormick.

You decide upon a machine which, you remember, showed up very favorably in a draft test—but you forget what sort of a "test" it was.

You remember the agent said his machine "is just as good as the McCormick."

You remember the McCormick is a little higher in price—

But you forget that the

**McGORMICK**

was on hand ready to meet any and all competition in the World's Fair field tests—tests in which all American machines were urged to take part.

You forget that the machine you think of buying did not obtain its draft figures in these tests with the McCormick—in the same field and under the same conditions.

You forget that the McCormick is higher priced only because of its higher quality.

Write the McCormick Harvesting Machine Co., Chicago, or call on their local agent.

**WHAT WE SAY WE DO WE DO DO**

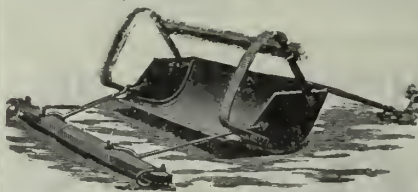
## GOING TO GRASS

How many thousands of acres yearly go to grass—or worse, for the want of proper farming facilities? Are any of your acres in this condition for lack of time or lack of help? Both barriers are quickly removed by the *Planet Jr. Seed Drills, Wheel Hoes and Cultivators*. With these famous implements, you can plant and care for six acres in the time you used to spend on one. This is the first chapter; the whole story is told in the *Planet Jr. Book for 1895—Free*.

S. L. ALLEN & CO.,  
1107 Market St., Philadelphia.

## THE Porteous Improved Scraper.

Patented Apr 13, 1883. Patented April 17, 1883.



Manufactured by G. LISSENDEN.

The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Leveling Land, Road Making, etc.

This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

This Scraper is all Steel—the only one manufactured in the State.

Price, all Steel, four-horse, \$40; Steel, two-horse, \$31. Address all orders to

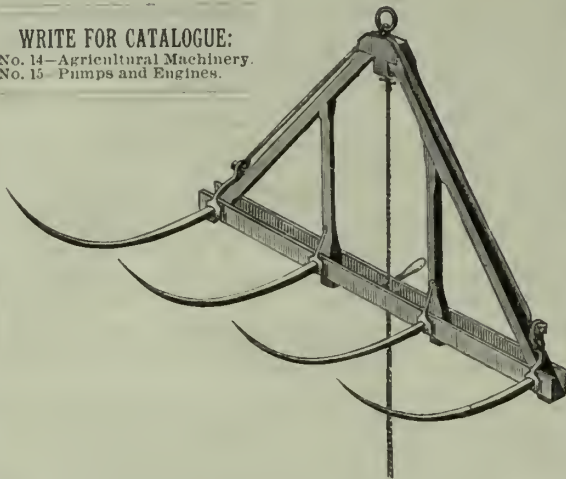
G. LISSENDEN, STOCKTON, CAL.

## Jackson's "Light Weight" Horse Forks,

Made and sold under the following Letters Patent:

No. 310,458, Dec. 3, 1879  
No. 300,697, Oct. 11, 1884  
No. 403,019, May 7, 1890  
Other patents pending.

WRITE FOR CATALOGUE:  
No. 14—Agricultural Machinery.  
No. 15—Pumps and Engines.



The purpose of this notice is to inform both farmers and merchants, who use or sell Horse Forks, that they must not purchase Horse Forks that infringe the above Patents; and to call their attention to the fact that certain horse forks, manufactured by F. E. Myers & Bro., Ashland, O., and imported and sold by the Deere Implement Company, of San Francisco, are direct infringements of the above patents, the manufacturers of the infringing forks having admitted in Court that their forks were an infringement of the above patents, and are now paying royalty for manufacturing and selling; and they have agreed not to sell any west of the Rocky Mountains.

All parties selling or using these infringing Horse Forks will be promptly prosecuted.

PRICE REDUCED (3-foot, with 4 tines, each \$20 00  
3½, 4 and 4½-foot, 4 tines, each 25 00  
5 and 6-foot 30 00  
Extra Fork Tines, \$2.50 each.

## BYRON JACKSON MACHINE WORKS,

625 Sixth Street, San Francisco, Cal.

## Protect Your Trees

—WITH—

### Gilman's Patent Tule Tree Protector.

PATENTED AUGUST 1, 1893.



FIRST PRIZE—Medal and Diploma—California Mid-Winter International Exposition.

Cheapest, best and only one to protect trees and vines from frost, sunburn, rabbits, squirrels, borers and other tree pests.

For testimonials from parties who are using them, send for descriptive circulars.

B. F. GILMAN,

Sole Manufacturer of Patent Tule Covers.

420 Ninth Street, San Francisco, Cal.

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BLIMYER BELLS—Church, School and Fire; ZIMMERMAN FRUIT EVAPORATORS;

LEADER WINDMILLS, NON-SHRINKING TANKS; PUMPS; PIPE AND FITTINGS;

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Write for Catalogues and Prices of such goods as you may want.

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AMERICAN AND FOREIGN

**Patent Solicitors.**

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Elevator, 12 Front St.

## ★ C. H. EVANS & CO., ★

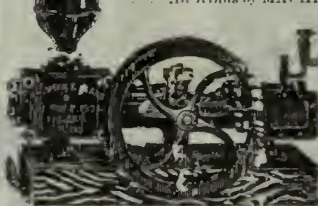
(Successors to THOMSON & EVANS.)

110 & 112 BEALE STREET, S. F.

MACHINE WORKS,

Steam Pumps. + Steam Engines.

All Kinds of MACHINERY



DEEP WELL PUMPS!

LIGHTNING WELL MACHINERY WORKS.  
LARGEST All kinds of tools. Fortune for the driller by using our Adamantine process; can take a core. Perfected Economical Artesian Pumping Rig to work by Steam, Air, etc. Let us help you. THE AMERICAN WELL WORKS, Aurora, Ill.; Chicago, Ill.; Dallas, Tex.

## HEALD'S Business College,

24 Post Street, - - - San Francisco.

FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils.

A Department of Electrical Engineering Has been established under a thoroughly qualified instructor. The course is thoroughly practical. Send for Circular. C. S. HALLEY, Sec.

## STUMP PULLERS HOOKER & CO. 16 & 18 DRUMM ST. S.F.



## S. F. MARKET REPORT.

## Market Review.

SAN FRANCISCO, April 10, 1895.

**FLOUR**—Trade runs along smoothly at uniform rates. We quote: Net cash prices for Family Extras, \$3 25@3 35 ¢ bbl; Bakers' Extras, \$3 15@3 25; Superfine, \$2 10@2 25 ¢ bbl.

**WHEAT**—Receipts yesterday were large, footing up 205,000 cts. This quantity, however, included the cargoes of three vessels about to clear for Europe, so that these heavy arrivals had no influence on the spot market. Business is slow, under tight offerings, though anything like a general rain just now would likely bring out increased supplies. At the same time the demand is not of pressing character, while values exhibit no strength. For No. 1 shipping Wheat 85¢ per cwt is about all that exporters are inclined to pay at the moment, while 84¢ is considered a full rate for choice lots. Milling descriptions are moderately steady, though the range of quotations is somewhat wide, say 90¢@95¢ cwt, the latter an extreme for fancy stock.

**BARLEY**—Movement is not brisk, and the situation generally does not look particularly encouraging for the selling interest. Strictly choice feed is not plentiful, and this class of goods alone brings full rates. Crop prospects are still reported as being bright in most sections, and this circumstance tends to check any buoyant feeling in values. Breeding descriptions are not heavily represented, but there seems to be enough to satisfy all current needs. We quote: Feed, fair to good, 70¢@71½¢; choice, 72½¢@73½¢; Brewing, 82½¢@83½¢ cwt.

**OATS**—Choice milling Oats are in rather tight stock and somewhat firm at quoted rates. Feed kinds, however, are fairly well represented, while the demand is slack, causing easy tendency in prices. Black Oats are in limited request, with quotations more or less nominal. We quote: Milling, \$1 07½¢@1 17½¢; Surprise, \$1 07½¢@1 17½¢; fancy feed, \$1 02½¢@1 07½¢; good to choice, 95¢@1 ¢; fair to good, 90¢@95¢; poor to fair, 85¢@87½¢; Black, \$1 10¢@1 17½¢; Red, \$1 10¢@1 20¢; Gray, 95¢@1 ¢ cwt.

**CORN**—Activity is still a lacking feature of the market. We quote: Large Yellow, 95¢@1 ¢; small Yellow, \$1 15¢@1 20¢; White, \$1 10¢@1 15¢ cwt.

**RYE**—Quotable at 85¢@86½¢ cwt.

**BUCKWHEAT**—Quotable at 80¢@85¢ cwt.

**OILCAKE MEAL**—Quotable at \$25 ¢ ton from the mill.

**COTTONSEED OILCAKE**—Quotable at \$24 ¢ ton.

**MIDDLINGS**—Quotable at \$18@19 ¢ ton.

**BRAN**—Quotable at \$13@14 ¢ ton.

**GROUND BARLEY**—Quotable at \$16 50¢@17 50 ¢ ton.

**HAY**—The market is quiet, with easy tone to prices. We quote: Wheat, \$8 50¢@11 50¢; Wheat and Oat, \$8 11¢; Oat, \$8 10¢; Alfalfa, \$8 9¢; Barley, \$8 10¢; Clover, \$8 9¢; Compressed, \$8 50¢@11¢; Stock, \$6 7¢ ¢ ton.

**STRAW**—Quotable at 70¢@80¢ bale.

**FEED**—Manhattan Horse Food (Red Ball Brand) in 100-lb. cabinets, \$8; Manhattan Egg Food, 100-lb. bags, \$11 50.

**BEANS**—No positive change in prices has occurred in a week. Whites continue to be steadily held. In Pinks there is hardly enough doing to warrant a guiding quotation and figures are to some extent nominal. Bayos and Reds are both slow of movement. We quote as follows: Bayos \$1 70¢@1 90¢; Butter, \$2 25¢ for small and \$2 25¢@2 50¢ for large; Pink, \$1 55¢@1 75¢; Red, \$1 60¢@1 75¢; Lima, \$1 60¢@1 70¢; Pea, \$2 75¢@2 90¢; Small White, \$2 75¢@2 90¢; Large White, \$2 50¢@2 70¢; Blackeye, \$3 25¢@3 50¢; Red Kidney, \$2 75¢@3; Horse, \$1 60¢@1 70 ¢ cwt.

**DRIED PEAS**—We quote: Green, \$1 15¢@1 50¢; Niles, \$1 10¢@1 25 ¢ cwt.

**SEEDS**—The market is generally quiet at old figures. Crop prospects in Mustard-growing sections are said to be everywhere favorable. Mustard, Brown, \$1 25¢@1 75¢; Yellow, \$1 75¢@2 ¢; Tricolor, \$1 50¢@1 75¢; Canary, \$3 40¢; Hemp, \$3 34¢; Rape, \$1 40¢@2 ¢; Timothy, 5½¢@6½¢; Alfalfa, 7½¢@8 ¢ cwt; Flax, \$2 25¢@2 50 ¢ cwt.

**POTATOES**—Prices steady, under good demand. We quote as follows: New, 1¼¢@2¼¢ ¢ lb; Early Rose, 35¢@40¢; River Reds, 30¢@35¢; Burbanks, 45¢@50¢; Oregon Burbanks, 55¢@60¢; Sallinas Burbanks, 75¢@81 ¢ cwt.

**ONIONS**—Good supply. We quote: Good to choice, 50¢@75 ¢ cwt; cut, 25¢@40 ¢ cwt.

**VARIOUS**—Active demand prevails for the several kinds. Receipts yesterday were 1020 bxs Asparagus, 760 bxs Rhubarb and 274 sks Peas. Cucumbers, 50¢@55 ¢ doz; Asparagus, \$1 10¢@1 75 ¢ box for the general run and \$2 ¢@2 50 ¢ for fancy; Rhubarb, 30¢@75 ¢ box; String Beans, 12¢@15 ¢ ¢ lb; Green Peas, 3½¢@4½¢ ¢ lb for good to choice; Green Peppers, 15¢ ¢ lb; Turnips, 50¢ ¢ cwt; Beets, 60¢@75 ¢ sack; Carrots, 30¢@50¢; Cabbage, 50¢@60 ¢ cwt; Garlic, 3½¢@4½¢ ¢ lb; Cauliflower, 30¢@40 ¢ ¢ doz; Marrowfat Squash, \$1 20¢@1 40 ¢ ¢ ton; Hubbard Squash, \$1 10¢@12 ¢ ¢ ton; Dried Peppers, 11¢@12 ¢ ¢ lb; Dried Okra, 15¢ ¢ lb.

**FRESH FRUIT**—Common qualities of Apples are in fair offering, with rather slow sale. Supplies of large choice stock are quite limited and such goods are bringing full prices. We quote: Apples, 50¢@81 ¢ for common to choice, with \$2 ¢@2 50 ¢ for fancy.

**STRAWBERRIES**—Receipts are increasing, the arrivals yesterday being 25 chests. There was a wide range in prices, as much stock came forward in unripe condition. Quotable at 40¢@75 ¢ ¢ drawer, the latter figure being paid for small lots of strictly choice quality.

**CITRUS FRUIT**—The market is well stocked with oranges. Fair demand reported for Mexican Limes, fresh supplies of which have been lately received. California Navels, \$1 50¢@2 50¢; Seedlings, 75¢@81 ¢ ¢ box; Mexican Limes, \$4¢@4 50 ¢ ¢ box; Lemons, Sicily, \$3¢@4; California Lemons, \$1 50¢@2 for common and \$2 25¢@3 for good to choice.

**DRIED FRUIT**—Trade continues of moderate proportions.

Following are the prices furnished by the Fruit Exchange. The figures presented represent carload lots, smaller parcels occasionally selling at slightly lower rates:

Apriots—Fancy Moorpark, 8¢; choice, do, 7½¢; fancy, 7¢; choice, 6¢; standard, 5½¢; prime, 5¢. Apples—Evaporated, 5½¢@6½¢; sun-dried, 4¢@5¢. Peaches—Fancy, 7¢; choice, 6½¢; standard, 5½¢; prime, 5¢; peeled in boxes, 12¢@13¢. Pears—Fancy, halves, 5½¢; quarters, 4½¢; choice, 4½¢; standard, 3½¢; prime, 3¢.

Plums—Pitted, 4¢@5¢; unpitted, 1½¢@2¢. Prunes—Four sizes, 4½¢@4¾¢.

Nectarines—Fancy, 7¢; choice, 6½¢; standard, 6¢; prime, 5½¢.

Figs—White, choice, 4¢@5¢; Black, choice, 3½¢@3¢. Dried Grapes—1½¢ ¢ lb.

Raisins—in sacks (50-lb. boxes selling at ¼¢ ¢ lb. higher): 4-crown, loose, 40¢; 3-crown, 2½¢; 2-crown, 2¢; seedless Sultanas, 3¢; seedless Muscatels, 2¢ ¢ lb; 3-crown London Layers, \$1 40 ¢ ¢ box in 20-lb. boxes; clusters, \$2; Dehesa clusters, \$2 50; Imperial clusters, \$3; 4-crown, loose, \$1; 4-crown, loose, faced, \$1 15 ¢ ¢ box.

**NUTS**—Quotations unchanged. Light jobbing movement. We quote as follows: Chestnuts, 6¢@7¢; Walnuts, 6¢@7¢ for hard shell, 7¢@9½¢ for soft shell and 9¢@9½¢ for paper shell; California Almonds, 5¢@6¢ for soft shell, 2¢@2½¢ for hard shell and — for paper shell; Peanuts, 4¢@6¢; Hickory Nuts, 5¢@6¢; Filberts, 8¢@9¢; Pecans, 6¢ for rough and 8¢ for polished; Brazil Nuts, 7¢@7½¢ ¢ lb; Cocoanuts, \$5@5 50 ¢ 100.

**HONEY**—Is quiet and likely to keep so until the new season opens. Stocks are not heavy, but the demand is small and promptly satisfied. We quote: Comb, 9¢@11¢; water white, extracted, 6½¢@7¢; light amber, extracted, 5½¢@6¢; dark amber, 5¢@5½¢ ¢ lb.

**BEESWAX**—Nominal.

**BUTTER**—Stocks are too large to admit of hope of improvement in prices for some time. Creamery—Fancy, 13¢@14¢; seconds, 12¢@13¢ ¢ lb. Dairy—Fancy, 11½¢@12¢; good to choice, 10¢@11¢; fair, 8¢@9¢; store lots, 6¢@7¢.

**CHEESE**—The market still wears an easy tone. We quote: Choice to fancy, 7¢@8¢; fair to good, 4½¢@6¢; Eastern, ordinary to fine, 10¢@14¢ ¢ lb.

**EGGS**—Prices are tending downward, arrivals being free. Quotable at 12¢@14¢ ¢ dozen for California, with Oregon selling down to 11¢ ¢ dozen.

**POULTRY**—The immediate outlook is not promising for sellers. One car of Eastern arrived Monday, two more are due and a fourth one is expected before the end of the week. Buyers, therefore, have the situation in their favor. We quote: Live Turkeys—Gobblers, 11¢@13¢; Hens, 13¢@14¢ ¢ lb; dressed Turkeys, 14¢@16¢ ¢ lb; Roosters, \$4¢@50¢ for old, and \$6 50¢@7 50¢ for young; Broilers, \$3 50¢@4 50¢ for small and \$5¢@6¢ for large; Fryers, \$6¢@7¢; Hens, \$5¢@5 50¢; Ducks, \$5¢@7¢; Geese, \$1 50 ¢@2 ¢ pair; Pigeons, \$1 50¢@2 25 ¢ ¢ dozen.

**WOOL**—Receipts are of fair proportions, but arrivals consist largely of poor stock. General activity is not likely to develop until choice qualities come to hand with greater freedom.

The weekly report of Thos. Denigan, Son & Co. says: "The past week has been devoid of interest in Wool matters. No large increase in receipts and no large share of business being done. The sale made at Bakersfield last month rather inclined wool-growers to hope that there would be a more active demand for Wool this spring, and at higher prices; but, so far, this market has not responded to any hope of such kind. In the East trade is being done in a quiet way, and, though Wool seems low—in fact, too low—yet it does not inspire manufacturers or dealers to become purchasers except for immediate wants, and to supply such wants foreign Wools have the call, to the detriment of our domestic stock, which has to be sold at lower prices just because it is domestic."

We quote spring: San Joaquin, year's staple, ¢ lb. 4¢@7¢ Do, seven months 4¢@7¢ Calaveras and Foothill 5¢@8¢ We quote fall: Southern & San Joaquin, light and free 5¢@6¢ Do, defective 3¢@4¢

**HOPS**—The situation is not favorable for sellers, the local inquiry being nominal, while the export demand is very small and limited to strictly choice particles only, of which the supply is notably slim. Eastern markets are reported as inactive. Quotable at 5¢@7½¢ ¢ lb.

## Short-Horn Bulls

OF MILKING STRAINS.

CALVES, YEARLINGS AND TWO-YEAR-OLDS.

ROBERT ASHBURNER,

Baden Station, San Mateo Co., Cal.

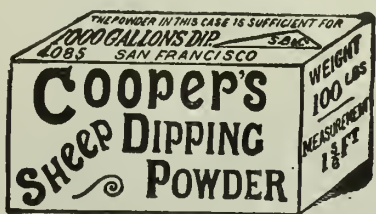
The cars of the S. F. and San Mateo Electric Road pass the place.

## SHORT HORN BULLS

FOR SALE.

A choice lot of the very best strains from one to five years of age.

J. H. GLIDE, Box 456, Sacramento, Cal.



## SURE CURE FOR SCAB.

PRICE, \$16 PER CASE.

Sole Agents,

SHOOBET, BEALE &amp; CO.,

418 California St., San Francisco, Cal.

## Jacks and Jennets,

RAISED FROM IMPORTED STOCK, for sale by V. GIANELLA, Honcut, Butte county, Cal.

## EGG RECIPE.

Take one postal card, write on its back, "How can I make larger profits on the egg crop?" Direct it to H. K. STARKWEATHER, 310 California St., San Francisco. Drop in postoffice and await prompt answer.

## Exterminating Squirrels.

No poisonous compounds used; sure death, and failure is unknown; material used costs nothing. Information free.

—Address—

F. E. BROWNE, 314 So. Spring Street, Los Angeles, Cal.

## WANTED!

Position as Manager on a Large Farm. Thorough acquaintance with Stock Raising, Dairy Business, General Farming. Experience in foreign countries: French, English, German correspondence; Bookkeeping; Graduate of Agricultural Academy in Germany. P. O. box 1885, Bakersfield, Kern County, Cal.

## Breeders' Directory.

Six lines or less in this directory at 50¢ per line per month.

## Horses and Cattle.

F. H. BURKE, 626 Market St., S. F. Al Prize Holsteins; Grade Milch Cows. Fine Pigs.

REGISTERED JERSEYS.—Sulphur Spring Farm, Niles, Cal.

BULLS—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

JERSEYS—The best A. J. C. C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale.

P. H. MURPHY, Perkins, Sac. Co., Cal. Breeder of Shorthorn Cattle, Poland-China & Berkshire Hogs.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

PETER SAKS & SON, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

## Poultry.

BARRED P. ROCKS, Brown Leghorns, Black Minorcas and Mammoth Pekin Ducks. In these varieties I have taken great pains in securing the best prize winners in New York and Mass.; besides, I have won highest honors at the State shows. I invite every one interested to visit my ranch and see America's best bred fowls. Reference, People's Bank, or any of my neighbors. Santa Cruz, Cal. J. W. Forgeus. Eggs, \$2 per setting, or three settings for \$5.

BUFF LEGHORNS.—Eggs from prize winners. \$1. \$2 and \$3 per thirteen. Incubator lots at reduced rates. C. W. Hansen, San Mateo, Cal.

EGGS FOR HATCHING—Buff, Brown and White Leghorns, Plymouth Rocks, White Wyandottes, Silver Wyandottes, Light Brahmas, Indian Games, Black Spanish, Bantams, Pekin Ducks—Two Dollars setting. Mammoth Bronze Turkey, White Holland Turkey—Three Dollars dozen, Theodore Cushing, Spokane, Washington.

J. R. CATLETT, Pleasant Grove, Cal., breeds only S. C. Brown Leghorns. Eggs for hatching, 60¢ per 13, or 11 settings for \$5. Satisfaction guaranteed. Can be had at T. Lynns, 1401 O St., Sacramento, Cal., or J. R. Catlett, Pleasant Grove.

C. NISSON, Petaluma. Brown Leghorns. Fowls and eggs at all seasons in any quantity. Circular free. "Nisson on Incubation," 25 cts.

WELLINGTON'S IMPROVED EGG FOOD for poultry. Every grocer and merchant keeps it.

FRED GLAZIER, Wheatland, Cal. Brown Leghorn Eggs. 50 cts. per 13.

A. BUSCHKE, Tracy, Cal., breeder of thoroughbred White Leghorns. B. P. Rocks, Pekin Ducks. Eggs, \$1 50 per 13.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for illustrated and descriptive catalogue, free.

R. G. HEAD, Napa, Cal., breeds all kinds pure bred fowls; 400 choice birds to select from.

## Swine.

F. H. BURKE, 626 Market St., S. F.—BERKSHIRES.

REGISTERED POLAND-CHINA HOGS.—Sulphur Spring Farm, Niles, Cal.

CHAS. A. STOWE, Stockton, Berkshire and Poland-China Hogs.

M. MILLER, Elsieo, Cal. Registered Berkshires.

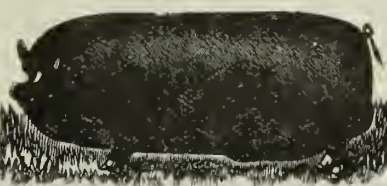
J. P. ASHLEY, Linden, San Joaquin Co., Cal. Breeds Poland-China, Essex and Yorkshire Swine.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.

## Sheep and Goats.

J. B. HOYT, Bird's Landing, Cal. Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale. Prices to suit the times. Correspondence solicited.

R. H. CRANE, Petaluma, Cal. Southdown Sheep.



Feed our Poultry Food and you will have healthy chickens and lots of eggs. Ask your dealer for it.

## Little's Chemical Fluid Non-Poisonous SHEEP DIP.



Beware of Cheap Imitations. One gallon, mixed with 60 gallons of cold water, will dip thoroughly 180 sheep, at a cost of one cent each. Easily applied; a nourisher of wool; a certain cure for scab. Little's Dip is put up in red, iron drums, containing 5 English or 6½ American gallons, and is sold to the trade by the English gallon. For the convenience of our many customers it is also put up in one-gallon packages, for which we make no extra charge. Each drum and package bears the orange label of "Little's Dip."

CATTON, BELL &amp; CO.,

(Successors to Falkner, Bell &amp; Co.) 406 California St., San Francisco.

**POULTRY KEEPERS CAN YOU AFFORD**  
SEND YOUR NAME & ADDRESS ON POSTAL CARD TO  
E. GRAND POULTRY RANCH, WEST RIVERSIDE, CAL.  
BY DECEMBER 15, NEXT, WE WILL SEND YOU SOMETHING USEFUL  
IF YOU WILL SEND US 5 CENTS.



## In These Dull Times

You Can Largely Increase

Your income by buying an incubator and engaging in the chicken business. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember the Best is the Cheapest. PACIFIC INCUBATOR CO., 1317 Castro St., Oakland, Cal.

## FRANK A. BRUSH,

SANTA ROSA, CAL. (Care Santa Rosa National Bank.) Importer, Breeder, Exporter.



S. C. White Leghorns,  
S. C. Brown Leghorns,  
Barred Plymouth Rocks,  
Black Minorcas.

Eggs, \$3 per 13.

Send for Circular.



THE  
HALSTED & INCUBATOR  
COMPANY,  
1312 Myrtle Street, Oakland, Cal.  
Send Stamp for Circular.

## EGGS FOR HATCHING,

In large or small lots, from Barred Plymouth Rock, S. C. Brown Leghorn and Black Minorcas, at 50¢ per doz. MRS. J. G. FREDERICKS, Madison, Cal.

## HATCH CHICKENS BY STEAM

WITH THE MODEL

## EXCELSIOR INCUBATOR.

Thousands in Successful Operation. SIMPLE, PERFECT, and SELF-REGULATING. Guaranteed to hatch a larger percentage of fertile eggs at less cost than any other incubator. Send 6¢ for Illus. Catalogue. Circulars Free.

GEO. H. STAHL, 114 to 122 S. 6th St., Quincy, Ill.

## THE IMPROVED VICTOR

## INCUBATOR

Hatches Chickens by Steam. Absolutely self-regulating. The simplest, most reliable and cheapest first-class hatcher in the market. Circulars free. Catalogue 4 cents.

GEO. ERTEL &amp; CO., Quincy, Ill.

## SUCCESSFUL INCUBATOR

A catalogue giving full information regarding artificial hatching and brooding, also a treatise on poultry raising sent FREE. Write now to Des Moines Incubator Co., Box 17, Des Moines, Ia.

## GUARANTEED

absolutely self-regulating and to hatch 90 per cent. of the fertile eggs. Self-regulating Brooders. Most perfect machines, best material and workmanship. Prices reasonable. Send 4¢ for large illus. catalogue, testimonials, etc. High Class Poultry & Eggs. Full stock Poultry Supplies. Peerless Incubator & Brooder Co., Quincy, Ill.

## POULTRY AND STOCK BOOK.

NILES' manual and reference book on subjects connected with successful Poultry and Stock Raising on the Pacific Coast. Over 100 pages, profusely illustrated with handsome, lifelike illustrations of the different varieties of Poultry and Live Stock. Price, postpaid, 50 cents. Address PACIFIC RURAL PRESS Office, San Francisco, Cal.

## BERKSHIRES.

We received many compliments for our herd from visitors at the State Fair. We competed for 13 ribbons and won 11, as follows: 2 special; 2 sweepstakes; 3 firsts; 4 seconds.

We have a few Choice Pigs for sale.

SESSIONS &amp; CO.,

P. O. Box 668,

Los Angeles, Cal.



# LAKE COUNTY.

A Region That Has Been Nominated the "Switzerland of California."

Its Attractions and Advantages Set Forth by Mr. F. W. Gibson, President of the County Board of Trade.

An Invitation to Seekers of Business Opportunities and to All Lovers of the Beautiful in Nature. — The Paradise of Tourists, Hunters and Health Seekers.

Lake county is about ninety-five miles north of San Francisco. It is nearly oval in shape, and is now coming rapidly into general notice on account of its varied advantages for homes. Its agricultural and pastoral resources are immense, while its mineral wealth is extraordinary. It is about twenty-five miles wide by seventy miles long. This county has the most natural boundaries of any in the State. The whole of it lies between two main ridges of the Coast Range. The mountains to the west are a continuation of the Mayacumas; those on the east are locally known as the Bear mountains. Both these ranges are formed of narrow ridges of broken mountains, and present some of the most magnificent scenery. From the beauty and grandeur of the scenery, this county has justly been named the "Switzerland of America."

The culminating point to the south is Mt. St. Helena; to the north, Mt. St. John. Bounded on all sides by mountains, the arable land of the county is in the valleys between these ranges. Lying about the center of the county is Clear lake, one of the most beautiful of mountain lakes, deriving its name from the clearness of its waters. The general topography of the county is rolling and hilly. Mt. St. John, one of the highest points in the county, is some 4000 feet above sea level. Cobb mountain, in the southern part of the county, is 4502 feet high; and "Konocti," sometimes called Uncle Sam's mountain, situated in the central portion of the county, is 3983 feet above the sea.

## CLIMATE AND CROPS.

Lake county is somewhat isolated so far as railroads are concerned, none touching the county, although two lines nearly reach it. But Lake county is bound to have the iron horse snorting up in that direction before long. The climate of this county differs materially in many respects from any other county in California. It presents diversities, not to say extremes, of climate, even within a few miles. Inside the western border range of mountains the air is shorn, in a measure, of its moisture, but is still damp enough to keep the temperature reduced greatly, and to make it a most pleasant place to live. The average rainfall is much more than in San Francisco. It is a remarkable fact that there has never been a year yet when the crops and grain were a

failure for the want of rain. The season of rain in this section may be said to begin in October and end in May. It is rare that it rains more than a day or two at a time, and the intervals range from a few days to several weeks. During this time is the most beautiful season for Lake county. Quite an amount of snow falls during the winter months in the mountains. In the valleys there is usually a fall of snow each winter, remaining on the ground only a few hours. The air is pure and bracing, and during the long summer months is delightful.

## AS TO HEALTH.

There is not a place on this coast or on this continent more healthful than Lake county. Many persons are now living here who came with their lungs seriously affected and who are now stout and robust. For asthmatic complaints the county has no equal. There are dozens of persons here who have suffered for years with distressing disease in other States, and other portions of this State, who were at once relieved upon coming to this county. We have never known a case where relief was not afforded almost immediately. Of course we have sickness, but it generally yields readily to treatment, and the old-fashioned chills and fevers are unknown to our people, except from hearsay or experience elsewhere. This healthfulness and adaptability to arrest diseases of the lungs is due to the altitude above the sea level, to the distance from the ocean, and to the dryness and equability of the climate. Clear Lake and the valleys are about 1500 feet above the sea, and the mountains rise from 500 to 2500 feet higher. This is the altitude suitable for consumptives, and is far enough from the ocean—being 40 to 60 miles—to be free from all fogs or winds.

## CHAPARRAL LAND.

It does seem surprising that so much of our chaparral land should be unoccupied. There are thousands of acres of this land in Lake county that we are thoroughly satisfied will prove to be the very best orchard and vineyard land. Much of this land will readily produce the best grain. The yield per acre is quite equal to the valley land, and the quality of flour superior. But we do not advocate the clearing of the hill land for grain raising. It will pay ten-fold better in fruit and vines.

There are thousands of acres of this land in Lake county that will be all under cultivation in the next ten years and will, without a doubt, be the most valuable land in the county. That is to say when it is set into orchards and vineyards, it will be worth much more per acre than the best valley land. Let anyone remember this and see if we are not right.

But the invalid in search of health can nowhere find more effectual remedies for all the ills that flesh is heir to than are to be found in our mineral springs, distilled in Nature's own laboratory. Every variety of mineral water—sulphur, soda, magnesia and chalybeate, of which the strengthening and tonic properties of the combination of iron form the base—are to be found within the area of Lake county, and within convenient access of the health-seeking invalid.

## OTHER ATTRACTIONS.

A large number of strangers visit our county every year and spend some time and considerable money in feasting their eyes upon our fine scenery and testing the efficacy and remedial virtues of our mineral springs. There can be no better advertisement of the attractions and advantages of this region than a name for a warm, welcome and open hand to the stranger.

It has enough fine land, when all shall be cultivated, to support a population of 50,000 and export a million

and a quarter bushels of grain, besides fruits and wines. It has beautiful and expansive lakes and hundreds of sparkling mountain brooks. It has grand and imposing scenery, and beautiful Clear lake nestled in its center, surrounded by mountains and reflecting the image of the clouds as they flit across her placid bosom, is a picture of rare loveliness and one sufficient to fill the eye and the heart with beauty. To those who want health, a pleasant climate, or small farms of fertile and productive land, we know of no county that offers greater inducements.

There are well-conducted public schools in every neighborhood, and churches are found in all parts of the county.

In certain localities pine timber is very plentiful. We do not know how much lumber is sawed yearly, but enough to supply the local demand is produced. Most of this is sugar pine, though there is some fir and yellow pine. In the northern part of the county there are thousands of acres of magnificent sugar pine—at least two or three townships.

## CLEAR LAKE.

Clear lake is an irregular sheet of water, between twenty-five and thirty miles long, and is in some places from eight to ten miles wide. The general depth of the lake is about forty feet, although it is more than double that depth at what is called the narrows, and is about 1400 feet above the sea or about the same elevation as Lake Geneva in Switzerland. The waters of Clear lake fall from six to ten feet during the dry season and empty into Cache creek, whose waters flow into the Sacramento river.

There are a number of pretty towns lying upon and adjacent to Clear lake, among which is Lakeport, the county seat of Lake county. It contains about 1000 inhabitants. The landscape scenery is very beautiful. At the head of the lake is a little town called Upper Lake, with about 400 inhabitants. The valleys in this vicinity are very beautiful and productive. Lower Lake is also a pretty place and contains nearly 500 inhabitants. It is situated some three miles away from the lower part of the lake. Sulphur Bank, or East Lake, is situated on the lake and is ten miles from Lower Lake. There are large quicksilver mines at this place, and when running give employment to nearly 300 men. Boating on Clear lake is as delightful an experience as a traveler can find.

## INVITATION TO SETTLERS.

Land can now be bought in this county at living and paying prices. To those who seek a healthy climate, the salubrity of which is unquestioned, and who care to make a home here out of which they can earn as good a living as in any other county in the State, we say come. To men of moderate capital who wish to engage in farming—men who need air and outdoor exercise to cure them of the ills that flesh is heir to, from overindulgence in office work, or to those who may perchance have an invalid wife or child—we say come. Our farms are rich in soil, easy of cultivation, and our climatic advantages inferior to none on this earth. Come now! Of all the counties of California—and we speak advisedly, knowing something of our great State from its northern to its southern boundaries—there is no other district that surpasses Lake either in climate, natural resources or agricultural capabilities.

## PLEASURE RESORTS.

Some of the springs and pleasure resorts are Saratoga, Siegler, Bartlett, Highland, Harbin, Allen, Whitter, Adams, Howard, Anderson, Carlsbad, Soda Bay and Blue Lakes, there being three of the latter which are clear and placid.

Kelseyville, having about five hundred inhabitants, is situated in Big Valley, the largest valley in the county. Lakeport is very pleasantly situated, perched on its seven bright, golden-clad hills, which are dotted over with white cottages, shaded by the dark-green foliage of California's pride, the

grand old oaks, all mirrored in the clear water of her beautiful mountain-locked lake. Middleton has four hundred inhabitants and is in the south end of the county, near our immense quicksilver mines, third in production in the world.

Lake county is a favorite camping resort. One may sleep out on the dry grass with only a blanket under him. He can depend upon nearly five months every year without dews or rains.

The fine grazing lands, together with the fertile valleys, which produce four crops of alfalfa and other rich kinds of feed, make the county desirable for the making of butter and cheese. The principal mining is done for quicksilver, although sulphur, borax, gold, copper and silver have been found.

## RICH FRUIT DISTRICT.

We have thoroughly examined this county in comparison with Santa Clara and other counties, and especially examined its adaptability for fruit. After looking over nearly all the orchards of the county, we say it is second to none for various kinds of fruits, among which are the most profitable for canning and drying purposes, such as peaches, pears, plums, prunes, apples, apricots and white nectarines, etc. Small fruits and berries of all kinds are quite as good as in any of the districts where these fruits are considered a success: and, remember, without any irrigation there is positively no need for any.

The significance of the exhibit on the first page of this paper is of the greatest importance, as it shows without doubt the claim of Lake county in fruit raising. We doubt whether there is a section in the State that can compare with the fruit of this county in size, color and flavor; it must be seen to be appreciated. Think of the date of this exhibit—the 19th of November, consider the green peas, string beans, green corn and fresh strawberries which were brought in from the gardens and taken in this picture. Of course, there is much in the picture we have missed listing. In starting this exhibit the first fruit was put in place the 7th of October, a little over one month, and that was very late to gather an exhibit. But, incomplete as it is, we feel proud, considering the lateness of the season. If the same interest is taken another season we will have an exhibit and show that will surprise the most sanguine, for there is no doubt we can beat the world in Lake county, if we will only try.

## WHAT THE COUNTY SEAT NEEDS.

A No. 1 grocery store.  
A hardware store.  
A dry goods store.  
A boot and shoe house.  
A clothing store.  
A cannery.  
A drier.  
Creameries and cheese factories.  
Large excursion steamer for the lake.  
Small steamers to pick up business around the lake.  
A good bank.  
Lots of good go-ahead citizens.

## BOARD OF TRADE.

The Lake County Board of Trade is now in its first year and has done a great deal for the county. Its present officers and members are:

F. W. Gibson, Pres., H. J. Lewis, Sec.  
P. T. Boone, V.-Pres., O. E. Meddaugh, Treas.

## EXECUTIVE COMMITTEE.

George Minstrel, F. W. Gibson,  
A. Levy, C. J. Lewis,  
F. W. Beach, H. C. Wilkinson,  
D. H. Atherton, L. Pedrazzini,  
J. P. Morby, P. T. Boone.

## MEMBERS.

M. S. Sayre, A. M. Reynolds,  
M. Justice, T. W. Crump,  
W. Edmonds, C. H. Hammond,  
E. C. Stickle, A. H. Spurr,  
W. C. Moore, R. W. Crump,  
M. R. Chamblin, N. Phelan,  
G. A. Lyon, W. L. Whitton,  
J. L. Allison, R. P. Eachus,  
F. N. Loring, H. W. Brewer,  
W. L. Rideout, G. W. Meyers,  
F. W. Gibson, P. T. Boone,  
A. Levy, H. G. Lewis.

Parties desiring further information in regard to our county, it will be furnished by any member of the Board.  
F. W. GIBSON



### A Giant Gang Plow.

The H. C. Shaw Plow Works of Stockton have just turned out of their shops one of the largest plows ever made in that city of big implement works. It is a gang of twelve blades, and is as remarkable for its solidity and lightness as for its size. It was made to fill a special order from George McCauley of Forest Lake, and is designed to turn over the ground for a width of ten feet. The beam on which the plows are fixed is twenty-two feet long, and the machine is twenty-eight feet over all, from end to end. It will be pulled by a steam traction engine of thirty horse power. The levers operating on the plow are respectively twenty-four and thirty-six feet long. It is expected that a great many more of these plows will be ordered when the work of this one has been demonstrated. It is the first of its kind ever made, and is a revelation to Eastern men. Last Saturday, A. B. Farquhar, a large manufacturer of agricultural implements of York, Pennsylvania, inspected the mammoth plow. "Nobody but a Californian," said he, "would ever think of constructing a plow on such a scale. It is truly wonderful what you people out here can do."

The big ground-turner is about completed, and can be seen for several days at the Market-street shop. It is well worth looking at as an example of Western enterprise. This is only an instance of what H. C. Shaw has been doing for some time in reaching out with new methods to secure trade. All through the San Joaquin valley the agricultural machinery turned out by his works are seen, and as he is always introducing the latest improvements on all of his machines, the farmers know that they are getting the newest devices when they go to Shaw's works.

### List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING MARCH 26, 1895.  
536,254.—DISH WASHER—E. H. Alvord, Seattle, Wash.  
536,267.—BUCKLE—C. A. Conger, S. F.  
536,186.—COAL BUNKER—Curtis & Isaacs, S. F.  
536,376.—PIPE—R. F. Dockery, Los Angeles, Cal.  
536,194.—STEAM ENGINE—W. R. Dow, Alameda, Cal.  
536,465.—RAILWAYS—E. Gay, Riverside, Cal.  
536,466.—VOTING MACHINE—F. H. Gilbert, Ridgefield, Wash.  
536,254.—CAR COUPLING—C. W. Hinton, Los Angeles, Cal.  
536,210.—SIGNAL—W. E. M. Jackson, S. F.  
536,576.—SKIRT ELEVATOR—J. Mallett, Oakland, Cal.  
536,236.—SEPARATOR—J. D. McKinnon, Portland, Or.  
536,233.—TELEPHONE—Sabin & Hampton, S. F.  
NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible by mail or telegraphic order. American and Foreign patents obtained, and general patent business for Pacific Coast Inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

A FEMALE CODFISH will lay forty-five million eggs during a single season. Piscatorial authorities say that were it not for the work of the natural enemies of fish they would fill all the available space in the seas, rivers and oceans.

A SLIGHT COLD, IF NEGLECTED, OFTEN ATTACKS THE LUNGS. "Brown's Bronchial Troches" give immediate and effectual relief.

It is believed that a herd of buffaloes is roaming the Red Desert northwest of Rawlins, Wyo. For the protection of these animals a bill has been introduced in the State legislature punishing the killing of a buffalo by from three to ten years' imprisonment.

### Personal.

IF ANY ONE who has been benefited by the use of Dr. Williams' Pink Pills will write to Box F, office of this paper, they will receive information that will be of much value and interest to them.

The tensile strength of iron at 400° below zero is just twice what it is at 60° above. It will take a strain of sixty instead of thirty tons to the square inch, and equally curious results have come out as to the elongation of metals under these conditions.

At Gettysburg 140,000 men were opposed, and of this number the total Federal loss was 28,191; the total Confederate loss 37,000.

## EXPOSURE

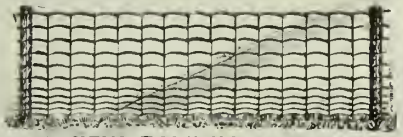


to wet and cold is very often the first step to Pneumonia, Consumption, Rheumatism or other serious diseases. Often we say, "Oh, it's nothing," when really our health for years or for life is hanging in the scale. A cold is the thin edge of the wedge of disease. To keep it out is important—and time is everything. When your temperature has been suddenly reduced by wet or cold take a teaspoonful of

## PAIN-KILLER

In a half glass of water or milk (warm if possible). Reaction begins at once, relief is immediate and you will have no cold, cough, sore throat or stiffness to reckon with. This sounds easy, and is easy if you have the Pain-Killer at hand. Get a bottle and get acquainted. It kills all forms of pain and is worth its weight in gold. Sold everywhere, at 25 cents a bottle. Prepared only by  
**PERRY DAVIS & SON,**  
PROVIDENCE, R. I.

**PRESSES FOR BAILING HIDES, HAY, HOPS, WOOL**  
WRITE FOR PRICES AND  
**I. J. TRUMAN AND CO.**  
236 BUSH ST. MILLS, CALIF.  
SAN FRANCISCO, CALIF.



**A NEW TALKING MACHINE**  
is the latest invention, and it differs from the phonograph in this: instead of merely repeating what is said to it; this machine takes both sides of the fence question. It gives straight wire a fair show against coiled springs, convinces the most skeptical that expansion and contraction must be provided for, and nothing but abundant elasticity will do it. Send for particulars.  
**PAGE WOVEN WIRE FENCE CO., Adrian, Mich.**

**"HARTMAN" WIRE FENCE**  
For FIELD and FARM  
HUMANE—STRONG—VISIBLE—ECONOMICAL  
Holds but DOESN'T HARM your stock.  
Can be built to STAY TIGHT all seasons.  
Get circulars & estimates from dealers or  
**HARTMAN MFG. CO.** 277 BROADWAY, NEW YORK.  
Factories: ELLWOOD CITY, Penna.  
For Beautiful Calendar, send 4 cts. in stamps.  
In answering advertisements mention this paper.

**SAVE YOUR FRUITS**  
from the Pests BY BUYING  
A DOUGLAS SPRAYER.  
Only \$9 complete, except barrel.  
Especially adapted for spraying  
Paris Green or London Purple.  
Throws a constant stream.  
THE BEST PAY THE BEST  
Our book on SPRAYERS will give  
you valuable information; it is  
FREE; ask for it  
**W. & B. DOUGLAS,**  
MIDDLETOWN, CT.  
N. Y. CITY. CHICAGO.

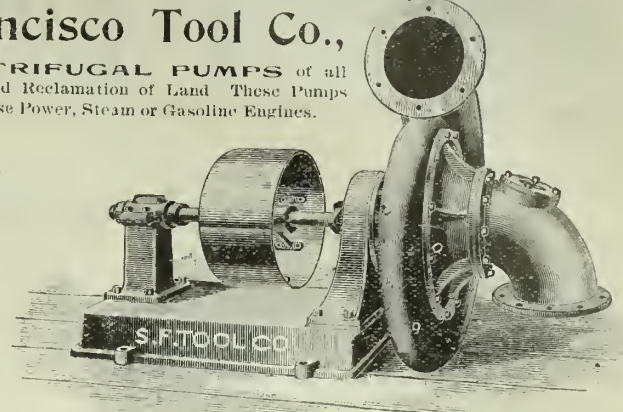
**FAT FOLKS**  
using "ANTI-CORPULENT PILLS" lose 15 lbs. 9 months. Cause no sickness, contain no poison and never fail. Sold by Druggists everywhere or sent by mail. Particulars (sealed) to WILCOX SPECIFIC CO. Phila. Pa.

## KROGH MAN'F'G CO.,

—SUCCESSORS TO—  
**San Francisco Tool Co.,**

Manufacture CENTRIFUGAL PUMPS of all sizes for Irrigation and Reclamation of Land. These Pumps can be operated by Horse Power, Steam or Gasoline Engines.

—ALSO—  
Triple-Acting Pumps,  
Deep-Well Pumps,  
Steam Pumps,  
Gate Valves of all sizes,  
Horse Powers,  
Wine Presses,  
Grape Crushers and Stemmers, &c., &c.



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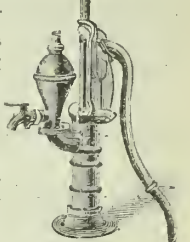


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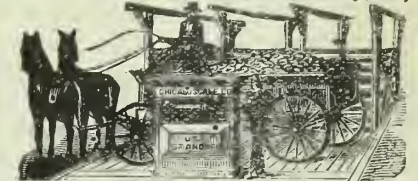
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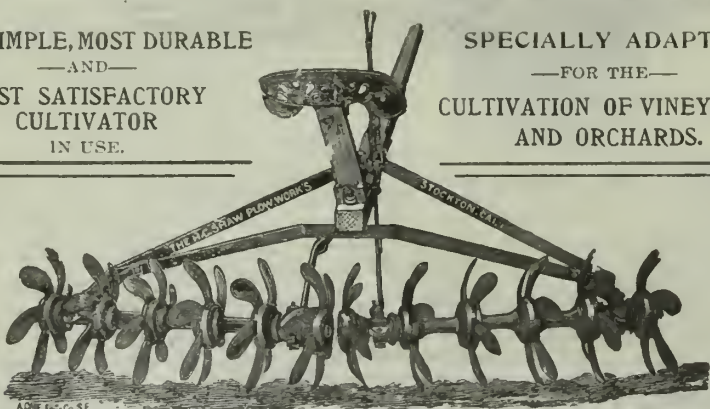
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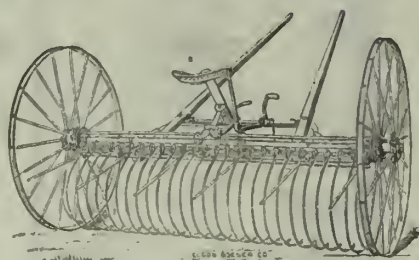
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 16.

SAN FRANCISCO, SATURDAY, APRIL 20, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

### In Death Valley.

From the earliest incursions of hardy Western explorers to the present day Death Valley has possessed a gruesome fame and has justified its name by its characterization in the records of scientific explorers, in the stories of pathfinders and prospectors, and in the masterpieces of descriptive writers. For nearly fifty years its impressive title and its real character, which is even worse, have stood in American literature as synonyms for the abomination of geographical desolation. But though Death Valley is still the fag end of creation and will perhaps long remain so, it is yielding somewhat to the encroachments of civilization and can now be visited with a degree of safety and even of comfort at certain seasons of the year. Mineral enterprises have colonized the region and even agriculture is attacking some parts of the valley with its desert-blooming spirit. And yet how harsh is Nature in that locality and how hardy the invader must be. A recent writer

ped and the tarantula. In the wailing of its mammals, the terror of its reptiles and the expression of its atmosphere Death Valley is, in the season, a veritable type of the fabled sheol. Its dangers have never been nor can scarcely be adequately described. And yet, because of its magnificent geological pictures of the wonderful powers of Nature; because of its resources in salts and minerals; because of the anthropological studies of the region round about, because of the novel experiences which the tourist will surely have, there are few places which will better repay him for his time and trouble.

Such are some of the marks of Death Valley, as laid down by John R. Spears in a recently published account of an incursion into the valley. Our engravings will have the greater interest in the light of these allusions. The lunch scene shows the unutterable desert on a quiet day in December, after the valley has rested for a while from its midsummer madness, and its climate is at its best. The other scene shows how culture is making its way in the more

### Good Roads Bureau.

Judging from the promptness with which the people of the State are calling upon the newly organized State Bureau of Highways, it is plain that such an institution meets a crying need. The members of the Bureau are Messrs. Manson, Maude and Irvine. It is reported that even before they could arrange their quarters in the State Capitol building a flood of letters were received from various portions of the State desiring information as to the best method of constructing roads and requesting some member of the Bureau to immediately come to their locality, examine the natural formation of the country and advise with them on the subject. Red Bluff could not operate fast enough by mail, so they telegraphed to the Bureau that there would be a meeting of citizens at that place the next morning who were unanimous in their decision to immediately construct a macadam road into the new mining districts, and desired the attendance of a member of the Bureau to



HALT FOR LUNCH—PANAMINTS IN THE BACKGROUND.



A RANCHER'S HOME IN DEATH VALLEY.

says: "I could not realize that Telescope peak, the loftiest Panamint, rose about two miles above the lowest part of the valley; nor that this lowest point was 200 feet below sea level; nor that in summer the air is kiln-dried until it contains but one per cent of humidity; nor that the well-shaded thermometer has ranged, according to authentic observers, all the way from 122° to 135° Fahr. But there were some things I appreciated fully, and one of them was a sand storm. I saw the air filled with a dusty fog clear to the mountain tops, while the sun grew dark and bright by turns as the fog increased and lessened. I saw plumes of dust waving above the cloud masses as do the feathery plumes of fog above the cyclone, and saw slender sinuous sandspouts a mile high, careening down the valley in the arms of the gale. It was a marvelous exhibit of the powers of Nature."

To most tourists Death Valley presents a complete picture of desolation. The mountains are rugged and devoid of verdure; the low land is a salty waste, where only the mesquite, thorny and gnarled, and the sagebrush, of the color of ashes, thrive. Even these have a constant struggle for life with the searing sand storms. As to the fauna of the country one finds the gauntest of coyotes and the leanest of wildcats, the lizard and the rattlesnake, the centi-

ped and the tarantula. In the wailing of its mammals, the terror of its reptiles and the expression of its atmosphere Death Valley is, in the season, a veritable type of the fabled sheol. Its dangers have never been nor can scarcely be adequately described. And yet, because of its magnificent geological pictures of the wonderful powers of Nature; because of its resources in salts and minerals; because of the anthropological studies of the region round about, because of the novel experiences which the tourist will surely have, there are few places which will better repay him for his time and trouble.

SOME progress is being made in utilizing the refuse pulp from the beet sugar factories. Not far from Chino Mr. Gird has wintered nearly 600 head of cattle fed upon beet pulp. Their ration per diem consists of from five to six pounds of hay and about eighty-five pounds of beet pulp. An excellent plan is adopted in allowing the cattle to determine for themselves the quantity of pulp they require. If they leave any in the troughs, the ration is in excess of their requirements. It is important in this pulp-feeding that the animals do not become satiated with the ration furnished. It is claimed that more beets than ever before will be grown in southern California this year.

EUGENE PALMER, of Sacramento, has been held for trial on a charge of assault to murder for firing a load of birdshot into the body of a man named Mitchell, who, with his wife, was picking flowers on Palmer's land.

THE lumber mills west of the Cascades are doing a larger business than any previous time during the past five years.

advise with them on the subject. It was agreed that Commissioner Irvine should go at once to Red Bluff on this mission. Commissioner Maude was instructed to consult with the Board of Prison Directors in regard to the establishment of the rock-crushing plant at Folsom prison. It really looks as though the good roads movement had taken a strong hold in California.

What is claimed to be the largest personal wine deal ever made in this State was consummated recently when F. Chevalier & Co. of this city bought from Dondell & Co. of St. Helena, Cal., 400,000 gallons of dry wine, which is now stored in Chateau Chevalier at St. Helena. The wine has already been sold to prominent wine-dealers in New York, where California wines are commanding better prices each year.

THE festival spirit now has possession of southern California. The great carnivals at Los Angeles and Santa Barbara are on this week, and according to telegraphed reports they are great affairs and arouse wide public interest. For the next two or three weeks the festival spirit will rule in the upper part of the State, and flower shows are in preparation at many points.



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ALFRED HOLMAN.....Editor.  
E. J. WICKSON.....Special Contributor.

San Francisco, April 20, 1895.

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## The Week.

**Weather and Crops.** On another page will be found the first weekly weather and crop report for the season by Sergt. Barwick, director of the State Weather Bureau. The many voluntary correspondents in all parts of the State give data for an excellent general view of existing conditions. There has been local frost injury here and there which will considerably reduce the aggregate yield of peaches and still far lessen the almond and apricot crops, which were previously cut quite short. What will come with the regular "drop" cannot yet be told. It looks, on the whole, as though we should have a good amount of fruit, but not an excessive supply, and that, if marketing proceeds as usual, the product of dried fruit will be less than usual. It should be a year for fairly good prices considerably better than last year all around. Haying will soon begin in the earlier regions, but the hay and grain as a rule are backward, as the heat deficiency shown by Sergt. Barwick explains. Showers have fallen over quite an area since our last issue, and more will be very welcome. If they come in due time and measure, we shall have one of the greatest hay and grain crops the State has ever produced.

**Cattle and Corn.** Much talk has been had about the recent notable fluctuations in the cattle quotations in the Mississippi valley, and various causes are cited. An official of the Agricultural Department at Washington is said to have attributed the chief disturbance to the decreased corn crop of the past few years. The last great crop of the country was that grown in 1891 and available in 1892. It amounted to 2,100,000,000 bushels. The crop of 1892 was 1,600,000,000; that of 1893, 1,620,000,000 bushels, and that of 1894 less than 1,200,000,000. There has been a falling off in this crop, which is the principal feed for cattle. It is true that the farmers have used wheat for cattle feed during the depression in the price of this cereal, but the falling off in the corn crop, in the opinion of this official, may have more to do with the rise than anything else. Lack of the principal food for cattle may have induced stock-raisers to put upon the market more cattle than formerly.

**Fruit Dealers Banquet.** Not long ago the representatives of the hay trade crossed their legs under the mahogany, as was duly chronicled in the RURAL at the time, and now those fruit dealers who compose the San Francisco Fruit Exchange have emptied their heads and filled their stomachs in the same cordial fashion. They also entertained many guests and had a really good time. According to the reporter's accounts, the fruits and

flowers of California were lavishly displayed in the decorations of the tables, which were arranged in the form of a hollow square, and overhead, swung from one chandelier to another, were eardons of glossy smilax and baskets of spreading ferns. On the wall behind President Dalton was a cartoon representing a bull and a bear in a hilarious mood. The banquet commenced at eight o'clock, and, to a musical accompaniment by a string orchestra, a most elaborate menu was enjoyed. The burden of the speeches was that there should be harmony between the producer, the drier, the canner and the seller. Would that there might be, and that something like an equitable division of the receipts could be made among them. If that end can be attained by dining, we hope the Fruit Exchange will banquet daily.

**Cereal Display.** At the Memorial Museum in the Golden Gate Park there is now a fine display of cereals, legumes, etc., donated by the S. F. Produce Exchange. It is the same that won honors at the World's Fair, and consists of two beautiful cases well filled with products. One case is of polished redwood, with a base about four feet high, upon which rests a pyramid holding nearly every variety of cereals and fibers grown in California. This splendid collection comprises four varieties of oats, fifteen of barley, seventeen of wheat, two of buckwheat, eight of corn, ten of peas and thirty of beans, besides Egyptian corn, broom corn, maize, sorghum, farina, cracked wheat, rolled oats, barley, semola, graham flour, oat groats, oat meal, hominy, split peas, canary, flax, rape, alfalfa, mustard, millet, coriander and hemp seed, hops, ramie, silk cocoons and raw silk, grades of cotton and wool; also, a fine display of wheat, oats and barley in sheaf. The other case is a cabinet of black walnut, within which are placed on shelves, inverted glass globes filled with various kinds of wheat, set off by a delicate green background. Besides this exhibit the Produce Exchange furnished seven silk banners prettily lettered in gold upon a dark garnet ground and bordered with golden fringe. The display will be found very interesting by grain-growers visiting the park during their stay in the city.

## Dairy Contest at the Coming State Fair.

The State Board of Agriculture is giving good earnest of its intention to develop the dairy features of its work and will thus commend itself to the support of this great branch of our productive industry. The dairy contest at the last State Fair, as our columns clearly showed, awakened keen interest, and it was a notable fact that one cow in that contest, Lady Woods, surpassed the world's record. That we have such cows, and more than one of them too, should be demonstrated at this year's competition. It is hoped that the new Dairy Bureau of California will do much to incite owners of good cows to bring them forward on this occasion to see just how good they are. It is not merely a display; it is a most direct business proposition to get the best cows and to dispense with poor ones. The awards are increased this year, and it is the purpose of the Board to have a thoroughly scientific test made. Photographs of the competing cows will be made and an engraving of each made for publication with her record in the report of 1895. The following is the full announcement by the State Board of Agriculture:

In lieu of the dairy premiums offered at the State Fair of 1894, as well as a substitute for the Milk Breed Sweepstake premiums, the following schedule of premiums and conditions were offered for a dairy prize contest at the State Fair of 1895:

|                           | 1st prize. | 2d prize. |
|---------------------------|------------|-----------|
| Cows 5 years old and over | \$60       | \$30      |
| Cows 4 years old and over | 50         | 25        |
| Cows 3 years old and over | 40         | 20        |
| Cows 2 years old and over | 30         | 15        |

The contest is to be conducted under the supervision of competent judges and experts, and to be of seven days' duration, commencing Thursday, September 5th, at 6 o'clock A. M. Every cow competing shall have been milked perfectly dry on the previous day at 6 o'clock P. M.

Any two-year-old cow producing less than 80 pound butter fat per day, and any three-year-old cow producing less than 1.03 pounds butter fat per day, and any four-year-old cow producing less than 1.25 pounds butter fat per day, and any five-year-old cow producing less than 1.49 pounds butter fat per day, shall be dropped after the second day's trial and excluded from the contest.

In the two, three and four-year-old classes, when one cow exceeds another in age, for each day's difference in age she shall be required to produce in excess of the younger cows competing in the class .072 of an ounce of butter fat. No increased production of butter fat will be required for difference in ages of cows when five years old and over.

Where cows are milked only twice a day, the hours of milking shall be at 6 o'clock A. M. and 6 o'clock P. M. When milked three times, the hours shall be 6 A. M., 2 and 9 P. M.

The contest shall be for butter fat, as determined by the Babcock tester or other equally accurate testing machine. Eighty per cent of pure butter fat shall be taken as a basis for determining the yield of marketable butter.

Samples of each milking for testing shall be taken as soon as milked, and from the whole amounts of such milking, after being thoroughly stirred and mixed.

For a composite test the samples of milk shall be taken as for a separate test, and the quantity taken shall be graduated

in proportion to the weight of each milking, and be placed in a vessel sufficiently large to contain the sample of milk for the seven days' test. The vessels shall be labeled and bear the name of the cow, and kept closed (except while adding fresh supplies of milk) and in a cool place.

No cows will be permitted to compete in this class unless thoroughly bred and registered in the books of their respective breeds.

The owner of any animal competing will be permitted to feed the same according to his own ideas, but the rations, as to kind and quantity, must be given and made part of the inspector's report.

We earnestly commend this matter to the attention of our dairy readers and to all breeders of improved dairy stock. If there should be other information desired or fuller details upon points advanced, we advise all to correspond with Edwin F. Smith, Secretary State Board of Agriculture, at Sacramento. Mr. Smith takes a deep personal interest in this issue, and will be glad to promote its popularity as far as possible.

## State Board of Horticulture.

The Commissioners Declare That Its Work Shall Go On In Spite of Gov. Budd's Veto.

At a meeting in this city on Tuesday and Wednesday of this week the State Board of Horticulture determined, in spite of the veto which has left them without funds, that the State Horticultural Office at 220 Sutter street shall be maintained and that the work shall go on as usual. This determination was reached after full discussion of all the considerations involved, and was supported by every member present. It was felt that the responsibilities resting upon the Board were too vast to be abandoned; that interruption of the work might involve the fruit industry of California in irretrievable disaster; and it was agreed that with or without public support the work should go on until another session of the Legislature, at least.

Under the law, the officers of the Board are State officials whose salaries are not dependent upon special appropriations. There remains, then, the expense of rent, lights, traveling expenses, etc.; and for these the members will provide from their private resources. They make no doubt that the next Legislature will reimburse them; and this is a reasonably safe reliance.

The considerations upon which this action and the personal risk involved in it are taken are fully presented in the following address, presented to the Board by its President, Hon. Ellwood Cooper. We give it in full because, in our view, it is a complete justification of the maintenance of the work in spite of Gov. Budd's veto.

## PRESIDENT COOPER'S ADDRESS

GENTLEMEN:—We meet under very embarrassing circumstances, the Governor having failed to sign the bill appropriating money to carry out the purposes for which this Board was created. We have a very valuable library, a great many lithographic plates and wood cuts, with other necessary appliances by which the work of the Board was carried on, also all the furniture, carpets, etc. If we give up our rooms, some place must be provided to preserve this property. The question for us to consider is whether we shall retain these rooms by subscribing liberally from our own funds, and depend upon the fruit growers of the State to make up a sufficient amount. A careful estimate can be made of the amount that will be necessary to meet this expense.

It would seem to be a great misfortune to make any material change in our work, or to change our location. We have accommodated the members of the State Horticultural Society with a place of meeting, as also other societies who are engaged in kindred work. Our rooms have been the nucleus of information sought by the fruit growers from the different parts of the State. Almost every question concerning the fruit industry can be answered here. It is indispensable to the best interests of the State. I cannot help but feel that the extent and importance of our work was not understood, otherwise funds would have been provided. The literature compiled by the State Board is sought by fruit growers throughout the world. No books of such value have been put forth by any State or nation. Our laws and regulations have been copied word for word by all the adjoining States, as also in foreign countries. California fruit growers have become famous in every clime. Four-fifths of all the immigration to the State in the past ten years has been secured by this fame. Settlers have come here to grow fruit or to work in fruit orchards. It has developed a means of livelihood not before developed. Women and children, young and old, work side by side and earn an equivalent to the amount of attention, care and energy given.

Through this Board the fruit growers have been kept together, organized to a degree that has secured results that could not have been secured in any other way. California as a State is destined to become one vast fruit orchard. This industry will be paramount to every other. It will be the controlling interest in State affairs, and must eventually govern the State.

It is most unfortunate that funds have been withheld. It may result in such injury that it will require many years to repair, but I hope not. It is for us, my fellow commissioners, and to us that the fruit growers of the State will look for the solution. We must at this meeting determine the course to pursue.

There are two ways—one to adopt a plan and depend upon the fruit growers to subscribe money sufficient to carry it out; the other to call a fruit growers' convention to be held at Sacramento in May, so as to bring together as many fruit growers as possible to discuss and to determine the wisest course to protect and save the fruit industry. Fortunately, the law creating the State Board of Horticulture was not repealed. The salaries of our officers and clerk are secure. I



refer you to the amended law of March 7, 1889, Sections 6 and 8. Our Quarantine Officer will exercise the same precautions, the same vigilance in preventing the introduction of new and dangerous insect pests as formerly. And right here, if you will allow me, I beg to refer you to my reports for the past four years, that you may realize the danger that awaits us if the gates are thrown open to the introduction of plants or nursery stock infested with dangerous diseases, fungoids or insect pests. If such were the case, it would be our bounden duty to stop tree planting and to discourage any further immigration. We would soon be overwhelmed by enemies we could not compete with. We would be hopelessly bankrupt, our lands, our possessions would not be worth the one-tenth what they are now. I will mention, for example, only two or three of the numerous dangers that would surely follow: The introduction of the *curculio*—the end of the prune and all the plum family. The introduction of the "peach yellows"—the end of the peach industry. Still a worse and more dangerous calamity would be the introduction of a root fungoid that exists in Europe, and which made its appearance in a nursery in this State. Fortunately, it was discovered before any of the trees were set out. Everything was destroyed and devastated by fire; the place fenced in so that the disease could not spread. This disease once established, it would be the end of deciduous fruit crops. It might take centuries before it could be worked out of the soil.

Is it possible that our legislators and the executive department of this great State comprehend the danger that hangs over its most important industry? We will have to rely mostly upon the boards of supervisors of the different counties to pay or provide for the traveling expenses of our officers, otherwise they cannot visit the localities. All experimental work will have to be discontinued. Office rent, postage, expressage and stationery will have to be provided for by voluntary contribution.

The bill asking for ten thousand dollars to continue the investigation and search for parasites was not reached. This most important of all other measures to be considered, either by States or nations, received no attention. Can any intelligent being interested in the productions of the earth comprehend this oversight?

I cannot refrain from speaking on this point, notwithstanding that I have so many times before urged its importance. Our experience and our knowledge of what has been gained by the introduction of parasites should so determine our course to destroy everything that crosses this path that leads to nature's most noble work. The cultivators of the soil—the producers—should have some consideration. No industry is comparable to that which furnishes the supplies upon which the human race subsists. The quality of that supply is as important as the quantity. Every safeguard should be thrown around the cultivator to protect his crops from the myriads of enemies that embarrass and harass him at every point. The highest degree of science should always be available, so as to secure the best results of his efforts and his labor. His vocation is the source of all taxation. His success insures prosperity to every class. Are we to disintegrate and await the ruin that is sure to overtake us, or are we to bear up under the humiliation and continue in this noble work?

I have received from fruit growers in the past few years over three thousand letters. Very many of these tell a sad story. The discouragement from the depredations of various pests has nearly destroyed all hope of being rewarded for the outlay in the enterprise—only one glimmering ray of light rests to encourage them. That is the introduction of parasites, or natural enemies that have been provided, and with proper distribution would overcome this difficulty. Our Government had in its employ Mr. Albert Koebele, who, as a searcher or student in this line of investigation, has no equal. His wonderful discoveries have given him a reputation that was not agreeable to the heads of his department, hence he was ordered to report to Washington within a certain time or he would be dismissed from the service. In one letter received it was stated, or given as a reason, that he was too near Mr. Cooper. Prior to this the Department of Agriculture in the Sandwich Islands had become acquainted with his important work in the interest of the California fruit growers—in the discovery of the *Vedalia* *Cardinalis*. An insect pest was devastating their sugar crops, in fact it threatened the total destruction of that industry. They had also numerous other pests disturbing their fruits. Mr. Koebele was tendered an offer of more than double the monthly salary that our Government paid him. He accepted and at once started to Australia, and thence to Japan, China and other places to search for parasites to destroy the sugar pest, and other pests destructive to fruits. From reports received from Hawaii the work is being accomplished with wonderful rapidity. These people feel that their greatest industry will be saved. Which commends itself to an intelligent mind, the action of our Government, or the action of the Hawaiian Government?

We are cognizant of what is going on around us. What other State, country or nation has more at stake in fruit culture than California? Will we stand by with arms folded until ruin overtakes us? Much has been said of late about economy. It would be well for us to consider a little what is economy. This question has a great many aspects. It cannot be discussed here, as it is not relevant to the purposes of a Horticultural Board meeting. However, it is not out of place to mention that two hundred and fifty thousand dollars were given to erect university buildings. The farming industry and the fruit industry are terribly depressed. Depress, then, still more and it is not university buildings that will be needed, but poorhouses.

There are many important questions concerning the fruit products yet to be settled. First, the pending negotiations to secure better transportation and cheaper rates. Second, better distribution of the fruits. Third, to consolidate under one head the direction of all shipments. Fourth, to establish a bureau of information. Fifth, to organize fruit inspection.

To accomplish this, the State Board of Horticulture must not dissolve. Respectfully submitted,  
April 16, 1895. ELLWOOD COOPER.

#### PREPARATION FOR THE NEXT TWO YEARS' WORK.

The determination to continue the work of the Board was made early in the meeting, and the greater part of the session has been devoted to preparing for the work ahead. There will be absolutely no stoppage in any department of the work, but an effort will be made to hold the expense down to the lowest practicable limit. With this end in view every item of out-go has been scrutinized; and ways will be found to make a very considerable saving.

All the old officers were re-elected, as follows: Ellwood Cooper, of Santa Barbara, President; L. W. Buck, of Solano, Vice-President; Members of Executive Committee—Mosher, of Santa Clara, and Kimball, of San Diego, with President Cooper. Messrs. Lelong and Craw were re-elected Secretary and Quarantine Officer.

As we go to press the Board is still in session, its labors being chiefly devoted to a study of ways and means.

#### Rainfall and Temperature.

The following data for the week ending 5 A. M., April 17, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week..... | Total Seasonal Rain-fall to Date..... | Total Seasonal Rain-fall Last Year to Same Date..... | Average Seasonal Rain-fall to Date..... | Maximum Temperature for the Week..... | Minimum Temperature for the Week..... |
|----------------------|----------------------------------|---------------------------------------|------------------------------------------------------|-----------------------------------------|---------------------------------------|---------------------------------------|
| Eureka.....          | .84                              | 39.92                                 | 6.40                                                 | 38.24                                   | 60                                    | 36                                    |
| Red Bluff.....       | 18                               | 27.07                                 | 6.17                                                 | 22.75                                   | 74                                    | 40                                    |
| Sacramento.....      | 24                               | 22.98                                 | 13.85                                                | 19.13                                   | 72                                    | 42                                    |
| San Francisco.....   | .09                              | 23.98                                 | 16.10                                                | 22.51                                   | 68                                    | 46                                    |
| Fresno.....          | .06                              | 12.69                                 | 6.17                                                 | 10.28                                   | 80                                    | 42                                    |
| Los Angeles.....     | .10                              | 15.36                                 | 6.40                                                 | 18.64                                   | 78                                    | 42                                    |
| San Diego.....       | .08                              | 11.39                                 | 3.98                                                 | 11.03                                   | 70                                    | 46                                    |
| Yuma.....            | 2.97                             | 2.16                                  | 3.49                                                 | 98                                      | 48                                    |                                       |

#### Gleanings.

A COMPANY has been organized and incorporated in Fresno, with a capital stock of \$50,000, to establish a creamery and cheese factory. The purchase of the necessary machinery will be made within a few days. Some of the leading business men of the county are interested in the company.

NAPA Register: "Is there anything in raising poultry and eggs?" we asked yesterday of a farmer whose twenty-acre place is a mile from town and whose orchard netted him \$400 last year. "Well," he said, "we could carry 400 or 500 chickens, but as yet we have not gone extensively into the business. We have been shipping a case of thirty dozen eggs a week to San Francisco, getting 12½ cents a dozen. The half cent pays the freight and the empty package is returned free."

ANDERSON VALLEY News: The orchards in the vicinity of Anderson will this year produce several thousand tons of green fruit, consisting of prunes, peaches, pears, plums and nectarines. The means at hand for handling the same by the growers are not adequate if they resort to the drying process. There is a splendid opening for a man or company who are posted upon the process to establish a dryer at this place. Such an event would be hailed with delight by a large majority of the growers.

NAPA Register: Under the direction of Supervisor Moser, 108 elm trees and as many palms will soon border Soscol avenue, between town and the Metcalf bridge. From there on to the entrance to the Asylum grounds some grading and filling in will have to be done before trees can be planted. Opposite Metcalf bridge ten weeping willows will be planted. Napa valley nurseries will furnish the trees—put them in and guarantee them one year—the elms for \$20 per 100 and the palms for \$1.25 apiece. The elms will be from six to eight feet high and the palms from three to four feet.

RIVERSIDE Press, April 6th: Exactly twenty years ago today occurred the great April frost which the pioneers of that day will recall. It followed a three-days' norther, which prevailed throughout the State. The grape vines had made several inches of growth, and the deciduous fruit was in blossom. There were no orange trees worth mentioning, and it is not likely that, had there been any, the cold would have been sufficiently severe to have affected the fruit; but the tender growth of the deciduous plants was black, as though fire had gone over them, and the crop of grapes, peaches, etc., in that year was considerably curtailed in consequence.

ARROYO GRANDE Herald: The creamery started up last Monday morning, and it was quite an event on the Upper Arroyo Grande. Many of the dairymen in that vicinity were present to see the wheels commence to go round. The creamery is prettily located in a sycamore grove where it is shady and cool. On one side is the babbling brook spanned by a new bridge giving access to the new county road, and on the other the towering mountains. \* \* \* The number of pounds of milk has rapidly increased daily, and on Thursday it had reached over 6000, besides the cream from Tommy Steele's private separator. It is expected that the amount of the daily delivery will reach 10,000 pounds within a week.

THE Pajaronian says: The stockholders of Pajaro Valley Fruit Exchange met at the Exchange office on Second street, Saturday afternoon, to consider the removal of the drying plant from Gilroy and the location for the same in this valley. Bids for taking down the buildings and putting up the same were opened and Edward Webb was awarded the contract for \$185. It was decided to engage teams to haul the material from Gilroy and not transport by rail. A tract of land on the Tim McCarthy ranch, in Carlton district, was secured for the location of the plant, and the buildings, implements and trays will be removed there as speedily as possible. This location is considered first class, and is within easy teaming distance of the large orchards.

SAN JOSE Mercury: During the past week the movement of dried fruits toward the market from the County Exchange warehouse was sufficient in volume to give even greater assurance than ever that the crop of 1894 would be closed out during the present season. Manager Philo Hersey reported yesterday that the apricots had all been cleared out, and it is understood that little if any of that fruit remains anywhere in the valley. There also remains but one carload of dried peaches in the warehouse, and from present orders they will soon be closed out in small lots. There are not sufficient peaches in the valley to fill all orders for the season. Five carloads of prunes were sold and shipped from the Exchange warehouse. Prices continue uniform, but not high. There is no prospect of a raise in the market, and it is also quite certain that everything on hand will be cleared out without any

necessity for yielding from the present standard of prices. The bulk of fruit yet remaining on hand is prunes. Altogether there are about 130 carloads of dried fruit yet remaining in the valley, which is about the same as the same time last year, with a smaller amount on the market in the East.

WATSONVILLE Pajaronian: From Deputy Assessor McCune we have obtained the following report of the number of trees in Pajaro township, Santa Cruz county, in 1894. It is too early to obtain the figures for 1895, but the bearing list has increased not less than 20%:

| Tree—        | Bearing. | Non-Bearing. | Total.  |
|--------------|----------|--------------|---------|
| Apple.....   | 66,184   | 64,195       | 130,379 |
| Prune.....   | 27,210   | 105,644      | 132,854 |
| Apricot..... | 13,912   | 17,716       | 31,628  |
| Peach.....   | 9,255    | 6,075        | 15,330  |
| Pear.....    | 7,387    | 3,352        | 10,739  |
| Cherry.....  | 5,087    | 5,352        | 10,439  |
| Olive.....   | 5        | 4,960        | 4,965   |
| Plum.....    | 1,517    | 2,919        | 4,436   |
| Walnut.....  | 299      | 3,779        | 4,078   |
| Orange.....  | 23       | 113          | 136     |
| Lemon.....   | 6        | 100          | 106     |
| Fig.....     | 16       | 36           | 52      |

Totals..... 130,899 214,241 345,140  
There are 74½ acres in table grapes and 75 acres in wine grapes. The valuation on these trees and vines for 1894 was \$104,245. The figures are not inclusive of the orchards on the Monterey side of the river.

THE Sutter Independent is hoping for the ultimate future of the wheat industry in California. It says: The Independent is firmly of the opinion that ten years from now wheat growing in the United States will be a profitable business. We are led to this conclusion by the fact that there is no new wheat land to be discovered in the United States and that we will reach the limit of production in a few years. If this be true, then it is certain that the increase of population will soon bring consumption up to production, and when that time is reached the price of wheat will necessarily advance to a fair figure. The present depressed condition of prices will discourage wheat-growing in all sections where other staples can be produced, and that of itself will naturally decrease the supply and tend to advance prices. By the time it becomes generally understood that wheat-growing is going to pay again our population will have so increased that there will be no wheat for export. And when that point is reached prices will be maintained. If then it be found that Argentine wheat is inclined to come this way, so as to threaten our home products, it can be treated as a legitimate source of Government revenue, and the wheat grower will then enjoy a little of that protection which has been accorded to the manufacturing interests. We may, from other causes, reach a return to good prices in less than ten years, but we feel confident that for the reasons stated it will not be deferred longer than that.

#### Behavior of Japanese Plums.

TO THE EDITOR:—I have a small family orchard containing about every variety of deciduous fruits. Among them I have one Kelsey plum, two Satsuma plums and two Rotan plums. They are all in the same soil, and the two latter kinds are next each other in the same row. They are all five years from the nursery. The growth of the two last has been healthy and the trees are all very thrifty and about the same size. Each spring for the last three years they all have bloomed profusely, being a solid mass of white blossoms. The Botans set fruit well; the Satsumas practically nothing. The Kelsey is much smaller than the others, but for three years has set fruit enormously. I have picked off the fruit to induce the tree to grow, but, while healthy, it grows very slowly, and each year loads itself with plums.

I also have a New White nectarine of the same age. It blossoms profusely, but sets no fruit at all. Peaches and apricots, and, in fact, all other fruits, set well.

Is this non-bearing a characteristic of these varieties? For if so, the sooner they are out and replaced by bearing trees the better.

Miramonte, Kern county. GEO. A. RAYMOND.

It is time we had a good general conference on these Japanese plums. We have had them in bearing long enough now to begin to determine their local adaptations. It is plain that they have great differences in growth and bearing and that the same variety has wide difference in behavior in different climatic regions. The Kelsey is usually a small tree and in bearing it is capricious, though everywhere, so far as we have heard, a perfect snowbank of bloom. The Botan is a famous bearer. The Satsuma has disappointed others besides our correspondent. In our own orchard a yellow variety, which we take to be the Normand, is the best bearer. We hope all growers will write us about their experience with Japanese plums.—ED. RURAL.

#### Irrigated Wheat in Kern County.

TO THE EDITOR:—I have read the articles on wheat growing in the RURAL with interest. Here we can raise wheat at a slight profit if we can get seventy cents a cental at our railroad station, Delano. It costs to haul there \$2 per ton, so we get for it in the field sixty cents.

We raise white milling wheat and get the top price. The yield is from ten to fifteen sacks (not bushels) per acre. Then, again, we get a full crop every year, as we depend entirely on irrigation, our rainfall being practically zero.

The size of crop depends almost entirely on the care and proper cultivation given. G. A. R. Miramonte.



## Weather and Crops.

## Summary of Crop Conditions in California Up to 15th Inst.

Reported by J. A. BARWICK, Director State Weather Service.

The average temperature for the week ending Monday, April 15th, was: For Eureka, 50°; Fresno, 56°. Independence, 56°; Los Angeles, 58°; Red Bluff, Sacramento, San Francisco and San Diego, 54° respectively, and San Luis Obispo, 56°. As compared with the normal temperatures, a deficiency of heat is reported at Fresno of 5°; Los Angeles, 2°; Red Bluff, 6°; Sacramento, 5°; San Francisco, 2°; San Diego, 5°; while Eureka reports the temperature conditions as normal.

The total precipitation for the week was at Eureka 1.10 inches; Fresno, Los Angeles, San Francisco, San Luis Obispo and San Diego, each .10 of an inch; Sacramento, 14 of an inch, and Independence a trace.

As compared with the normal precipitation, there is deficiency reported at all points except Eureka, where an excess of .22 of an inch has occurred. The weekly deficiency is for Fresno .24 of an inch; Los Angeles, .33 of an inch; Red Bluff, .39 of an inch; Sacramento, .53 of an inch; San Francisco, .42 of an inch, and San Diego .11 of an inch.

The deficiency in temperature over the great agricultural, horticultural and viticultural districts of the State have had a retarding effect upon the growing of crops and the ripening of early fruits and berries.

The deficiency in the rainfall has been felt over the greater portions of the State, for without copious and frequent showers in April and May the grain and hay crops will receive somewhat of a setback; however, the cool weather, in conjunction with the lack of rain, prevents any injurious effects from being noticed so early in the season, especially after such fine rains as we have had during the past winter months.

The frosts of April have injured the fruit crop in the lower end of the San Joaquin valley, as well as in the Santa Clara valley and the upper end of the Sonoma valley, and in the Anderson valley fruit belt of Mendocino county.

The following is a summary of the crop conditions in the various sections of this State:

## Santa Clara Valley.

SANTA CLARA (Santa Clara)—Crops look well; weather past week very favorable. (San Jose)—Grain looking well and growing rapidly. Fruit has a rather hard time with the frosts; it is an off year for Moorpark and the few there were are frosted, except in sheltered places; and Royals, even in the foothills, are cleaned out. Prunes and peaches seem to be setting well.

## Mountain Counties.

INYO (Independence)—Weather has settled to an agreeable and enjoyable warmth, and vegetation of every kind is making rapid growth. It was feared that the late cold snap had killed much fruit, but happily such is not the fact in this vicinity. Even apricots, of which it was feared all were destroyed, now promise a fair crop. Mr. Densmore tells us that his extensive prune orchard at Camp Independence is so full of blossom that at a distance the trees appear as though covered with snow.

ANADOR (Oleta)—Prospects continue favorable for good hay crop. No damage was done by the north winds or the frosts which have occurred every night in the week. Peaches, apples and prunes have escaped without damage. Grass on the ranges is springing up rapidly despite cool nights. Snow has disappeared as high as Wyles Station.

## San Joaquin Valley.

SAN JOAQUIN (Lodi)—Weather generally favorable to all crops. Wheat fields are spotted, doing well what there is of it. Early-sown barley heading out. Haying will be late. Alfalfa at least two weeks later than usual. Apricots are poor. Almonds are dropping to some extent. Growers of watermelons are busy planting their fields. The acreage will be much larger than last year. (Bethany)—The dark weather of the past week has helped the grain a great deal, but if it was not for the heavy shower of rain that fell to-day (13th) the hay would be very short. A few small fields of hay have already been cut. (Stockton)—One-half inch of rain fell here to-day (13th), assuring bountiful crops of all kinds all through this district. All crops are doing finely; prospects were never better.

STANISLAUS (Turlock)—The crop prospects are very good, generally speaking. The rye crop will not be as heavy as indications earlier in the season would warrant. Peaches will yield abundantly; other fruits will be short; apricots nearly a failure. (Westley)—The prospect of crops is good, especially the early-sown grain, which, with favored spring, will make at least ten sacks per acre. But the late-sown grain must have at least two inches of rain between now and the 15th of May, otherwise will not make any more than one-third to one-half a crop, for the reason that the north winds blow in this section of country for about ten days. Early-sown wheat and barley look fine.

MERCED (Livingston)—Crops in this vicinity are doing well, and the farmers seem very much encouraged over the outlook. The frost has done some damage to the rye, and also killed some fruit, etc., but not to any great extent.

MADERA (Madera)—Weather continues favorable for large crops of all kinds. The grain looks fine and there will be large fruit crops of all varieties. Grapes beginning to bud. Some of the earliest were hurt slightly by frost.

FRESNO (Reedley)—Very favorable growing weather; with one or two more showers there will be an immense crop of wheat. Farmers are doing considerable summer-fallowing. Vines are putting out. Cutworms have not made their appearance in this immediate vicinity, but are doing considerable damage in neighboring localities.

TULARE (Lime Kiln)—Grain, hay and feed all in good shape, but need rain to keep growing and insure good crops. Present indications are for rain. Citrus trees are putting out a healthy growth and do not seem to have suffered through frost and the past winter's heavy rains. (Goshen)—Hay and grain are in fine condition, well advanced and abundant. The fruit has been damaged by frost—in some places all gone, in

others there will be a part crop. (Tulare)—Cereals, where no irrigation can be had, are suffering for want of rain, and if rain does not soon come some will be very short and kernels will not fill. Apricot crop is no prospect. Peaches suffered by the last frost. Some localities may have half and others one-third of a crop. The latter probably will be realized. Prunes suffered severely. Some crops entirely destroyed; others have a little left; even uectarines suffered. Almonds are gone; grapevines frozen and will be later this season. Vegetables suffered to some extent, and if we do not get rain soon outlook will not be very promising.

KINGS (Hanford)—Warm and clear during the week. Gale from northwest Saturday evening, accompanied by rain.

KERN (Bakersfield)—The hay and grain crops are progressing rapidly and favorably. Some alfalfa has been cut during the week. Grain is heading. Pastures, where not irrigated, are commencing to dry. Garden and orchard crops are doing as well as possible since our untimely frost.

MARIPOSA (Mariposa)—Crops look favorable, both of grain and hay. Peaches, apricots, almonds, and probably pears, were damaged by late frosts, but to what extent cannot as yet be determined.

## Southern California.

SANTA BARBARA (Ballard)—We have had splendid growing weather during the past week and cereals are coming on vigorously, although rain just now would be beneficial. Light frosts every night have caused little or no damage, except in very low districts. Early apricots are a failure for the season and prunes will yield a light crop. Early corn and potatoes doing well. Light westerly winds. (Carpinteria)—Everything seems favorable for good crops. Ground nearly ready for planting. Some hay being cut the past week. Some fruit trees in blossom. Delightful days the past week with cool nights and mornings. No high winds or frost.

VENTURA (Ventura)—The weather has been favorable for all growing crops. Considerable hay will be cut during the next week. Bees are swarming in the most sheltered locations and the outlook for a good yield of honey seems good. (Saticoy)—Crop outlook very good, especially barley, and fruit, such as peach and apricot, will be a fair crop, unless there are frosts. (Fremontville)—"Desert wind" blew from 3:30 p. m. of the 4th till 2 p. m. of the 7th, amounting to a gale sometimes, and damaging grain crops, especially on sandy land. The week has not been favorable to growing crops. Farmers are busily destroying weeds and fitting the land for the bean crop. (Saticoy)—Crop outlook is very good; barley especially. Fruit prospects, such as peach, apricot and pear, are for a good yield unless late frosts come. Weather pleasant.

LOS ANGELES (Covina)—The last rain gave the grain a great boost. Some alfalfa hay is ready for the market, quoted at \$7.00 per ton. The Berry Growers' Association is operating and doing considerable business. (Los Angeles)—Condition of crops continue satisfactory, though rain would be acceptable for late sown grain on mesa lands. Deciduous fruits setting well, except apricots, which will be light. Orange trees in full blossom.

ORANGE (Tustin)—Fine, warm, growing weather; no rain. Grain crops generally look well and promise a good yield. First crop alfalfa and a little barley is being cut for hay. Apricots bloomed and set fairly well in most orchards, but have rotted and fallen since last rain. Crops will be very light. Orange market remains poor and shipments continue small.

SAN BERNARDINO (Chino)—Beet planting is progressing well, about 2500 acres on the Chino ranch being now planted, and thinning has commenced in earnest. At Anaheim the crop is practically all planted, over 2400 acres being reported.

RIVERSIDE (Riverside)—Weather has been very favorable both for crops and fruit. Much of the wheat and barley is being harvested. Grain will be a fair crop. Oranges moving slowly; price fair. Deciduous fruit promises well. (San Jacinto)—Indications are favorable for a large crop of all kinds of fruit, except apricots, which will be a short crop. At this writing, the 10th, indications are for rain. A creamery has been started here.

SAN DIEGO (Chollar Valley)—Some good rainfalls will be very beneficial, particularly for those having corn, beans and other truck, as well as for fruit men. Judging from the cereal crops I have seen between here and near-by localities, the prospect is not favorable for an overproduction of hay, but there is no doubt of a big supply as a whole taken throughout the county. (Julian)—The orchards are putting forth leaves and blossoms and the abundance of the latter give promise of the largest fruit crop ever known in the mountains. The young grain is coming up vigorously and an additional shower of two will insure a large crop of hay and grain.

## Coast Counties.

SAN BENITO (San Benito)—The crop prospect is still favorable for a heavy yield. A little rain would be beneficial, but nothing is suffering yet.

SANTA CRUZ (Watsonville)—Have not had our usual fogs, which is some detriment to crops. Prospect for large crop of apples and pears. (Santa Cruz)—Nights cool. Vegetation somewhat retarded; no rain, no frost—scarcely warm enough to be called seasonable. Grain looking well. Good rain needed. Prospect good for apples and prunes; peaches no good; too early for grapes.

MONTEREY (Gonzales)—The growing crops on the upland are beginning to show the need of more rain. The adobe seems to be fairing much better, as the growth thereon shows a healthy appearance and promises to yield an abundant harvest. (Jolon)—There has been light frost here every morning but one during the past week, but no damage. The condition of the wheat crop is excellent.

SAN LUIS OBISPO (San Luis Obispo)—We have had very high winds, which have been damaging to all crops put in late or on land in poor condition. To-day there are good signs of rain. Considerable land is now ready for green crops. Some corn has been planted. Pasture is very good and all stock doing well. All fruits seem to be doing well; apricots only may be scarce. (Paso Robles)—Early-sown grain, which comprises the bulk of the area sown to cereals in this district, is running up rapidly and forming head. Some barley, of which little is sown here, is already heading out. Grain is all looking well, but a moderate shower is hoped for; none is needed, however, for orchards which are sufficiently moist and in good tilth. Plums, apples and pears are in the height of bloom. Late varieties of peaches are setting fruit in quantity. Blossoms that survived the frost of the middle of March are now bursting their fruit from the cups. (Santa Margarita)—Continual frost had a damaging effect on fruit. Wheat, barley and oats is looking well in this vicinity; not so back in the Carlsbad valley, where rain is badly needed.

HUMBOLDT (Eureka)—A severe frost occurred on the 5th, and light ones on the 6th and 11th. No serious damage. The rainfall has been fairly distributed; four days clear to fair and three on which showers occurred. Agricultural operations are now progressing favorably. (Hydesville)—Weather generally favorable for all crops. Severe frost of April 5th did very little damage. Farm work well in hand. Crops growing nicely. Plum, cherry and prune trees in full bloom this week.

## Sonoma and Napa Valleys.

MENDOCINO (Ukiah)—Pasture and grain prospects are very good. Peaches and almonds mostly killed by the frost. Prunes are reported considerably damaged in some locations. Apples uninjured. Spring plowing was put back by the rains

about the middle of March, but is now progressing satisfactorily. Hop pruning is well along in the valley, and another week will probably see this part of the growers' work at a close for the present year. The fruit outlook in this county is not particularly encouraging at present. Of late there have been many severe frosts, and a large number of orchards have suffered severely. According to a report from Anderson valley, one of the finest fruit-growing sections in the county, there will scarcely be a fourth of the average yield in the 'therma' belts.

NAPA (Napa)—Hay and grain never better. Barley four feet high and heading out in many places in the valley. Almond and apricot crops will be quite short; other fruits doing well. Grapes coming out nicely. Grass splendid.

SONOMA (Cloverdale)—The Cloverdale Orange Company has completed the planting of 800 Washington navel trees on its tract east of town. Fifteen hundred orange and 400 lemon trees have been planted in Cloverdale township this season, and the cold snap has done no damage. (Forestville)—Crop conditions for the past week have been favorable. Grass and grain have made a rapid growth. Fruit trees are leaving out, and very little fruit is now dropping from the trees. The outlook is that the fruit crop will fall considerably under the average yield. Frosts of 11th and 12th did no perceptible damage to fruit. Work in the different hop yards is going on with all possible speed. Most of the fields will soon be ready for stringing. (Petaluma)—Crop outlook very encouraging; the early-sown grain is in fine condition. Some of it is beginning to head, while the late-sown is growing very rapidly. Prospects for a fruit crop still continue good. Almonds, apricots, peaches, good-sized apples and pears in full bloom. No damaging frosts to date. (Sebastopol)—Weather April 1st to 13th includes fog, turning into rain, north winds, cloudy and cool days. White frost mornings of 5th and 11th insts.; temperature from 38° in a. m. to 60° at noon. Hard rain night of 9th; only three warm, sunny days. Fair prospect for apples, though not a large crop. Cherries promise well, as also prunes, but too soon to speak with certainty. Pears rather a light crop. Peaches—Early Crawford only medium crop. Good trees in good locations show well, though fruit may yet drop. Orange Clings generally reported light. Muirs look well. Stock of dried fruit mostly sold, also potatoes. Not many apricots raised here and very little fruit on trees. Butter, 10 cents per pound first quality. Grapes just budding out. On the 6th inst. large flocks of geese passed over us flying north—unusual number.

## Sacramento Valley.

YUBA (Wheatland)—Past few warm days and rain on 13th were very beneficial to growing grain, which now looks very promising. Apricots were injured by frost and will be a poor crop. Cherries, prunes and pears slightly above an average. Hop pruning is practically over and some yards are already stringed. (Marysville)—North winds in past week have done no particular damage. With a good shower in this month fair crops will be assured.

TEHAMA (Red Bluff)—Grain holds out favorably and with a little more rain will be a heavy crop. Apricot, pear and cherry crops not up to the average; peach and almond crops larger than last year. The prune crop cannot be estimated yet, but it is thought will not be as large as last year. Feed plentiful and stock in prime condition. Sheep shearing is now going on. The increase in lambs this year reaches 100%. (Corning)—Weather favorable to grain and fruit. Fallow plowing progressing. Seeding all completed. Area of fallow plowing 50% less than season of '94.

NEVADA (Chicago Park)—Crops are all looking well. Frost did some damage to plums and peaches. Grain coming slow, but is looking fine.

SHASTA (Anderson)—The orchardists hereabout have nearly completed their spring cultivation and their places have a most decidedly prepossessing appearance. Every peach and prune tree loaded to the water line with its burden of fruit, bespeaking an immense crop.

BUTTE (Pentz)—On the 1st, 2d and 3rd of the month frosts occurred, doing some damage to apricots, prunes and plums. No other fruit was injured. Grain and hay doing well. (Hout)—The rain of 13th assures very fine crops this season, they being over three weeks in advance of last year, and never gave better promise than now. No wind, frost nor hail here. (Palermo)—As far as has been able to be ascertained, no harm by frost occurred in this vicinity, and everything is doing as well as could be wished for.

PLACER (Roseville)—Crop prospects good. Summer-fallow all done. Early grain commencing to head out. There is not much wheat in the neighborhood this year. Apple, peach, plum, fig, almond and cherry trees loaded. Apricots and cherry plums half a crop.

COLUSA (Colusa)—A light rain has fallen, which is just the thing for growing grain. The outlook for good crops is now very promising. Summer-fallowing on high lands about completed. Fruit of all kinds indicates a heavy yield. No damage by frost in any part of the county. (Grand Island)—Grain on high land looking well, although sown late on account of the ground being too wet to plow.

YOLO (Blacks)—Everybody in this neighborhood agrees that the crop prospects were never better at this time of the year than at present. (Winters)—Farmers say that the grain crop looks well, and fruit-growers think that while certain varieties may make a light crop, the loss will more than be compensated for by a heavy crop of other varieties.

SOLANO (Binghamton)—Judging from the blooms and young fruit on the apricot, almond, fig and apple trees in W. H. Smith's orchard, the frost did very little damage in this vicinity. (Cordelia)—The late frost has done much more damage in this valley than was at first expected. The apricots and almonds have been almost completely destroyed, and the cherries suffered a similar fate. (Collinsville)—Crops were much benefited by the recent showers, and prospects for a good yield are flattering at the present time. (Batavia)—The weather has been very beneficial to crops, as there has been very little wind and the temperature mild. The summer-fallow grain is very rank and at present promises a good yield. Winter sown is looking fine and also promises a good yield.

SACRAMENTO (Clay)—Crops are growing nicely; the late sown wants rain. Oats are heading. Early barley beginning to head. Apple trees are beginning to bloom. The north wind of last week dried up the ground a good deal, causing summer-fallowing to be stopped. (Sacramento)—The bloom on Bartlett pear trees is very shy, and there will be a light crop in this vicinity. Tragedy plums are heavy. Peaches are a good crop. The cold weather is fine for grain and hay crops. The frosts have done no damage about here. Prunes are late and need some warm weather to bring them forward. The season is late for all crops. (Union House)—Summer-fallow wheat is looking remarkably fine, as is all other grain. Rain would be a great benefit to grain. Small vines, fruit trees and berries are looking well. (Elk Grove)—Grain is growing well, the weather being warm and heavy dews falling during the nights. Peaches show a fine prospect for a good crop. Apricots and other fruits are not so good. No frost during the week, and no winds to speak of. Showers last Saturday. (Grand Island)—From present prospects it is evident that every foot of the island—17,000 acres—will be cultivated this season, and an immense crop will be the result. (Arno)—Grain and fruit are looking well, there being no damage by frost during the past week. (Arno)—The winds from the north dried the ground rapidly in the middle and end of the week. To-day's rain will prove invaluable to late sown grain. The crops look well, and have made rapid growth. There is every indication of a good crop of hay.



## HORTICULTURE.

### Condition and Outlook of Lemon Interests.

By G. W. GARCELON: Read at the Farmers' Institute at Riverside.

If there is one industry which deserves and should receive the fostering care and attention of those who are interested in southern California, it is our "Lemon Interests." Our oranges, being ready for consumption as soon as taken from the tree and now mostly in the hands of the southern California fruit exchanges, are, through the proper systems, being used, achieving success for the growers. Our lemons, because of different conditions and different uses, should have intelligent care in gathering, keeping and marketing.

In my opinion the difficulties to contend with are chiefly these:

1. The lemon tree being in blossom and fruitage continuously—not like the orange, which has its season of bloom, afterwards its fruit—many growers gather their crops of lemons, so as to finish their work, in sizes from a good sized walnut up to a fair sized pumpkin, stimulated perhaps by the fact that they are taking the fruit in out of the cold. And what earthly use beyond injuring the reputations of our "Lemon Interests" this proceeding accomplishes is more than I can guess. But year after year growers will put their hands in their depleted purses and "pay out their Irish dividends" as just claims for rebate. These overgrown and immature lemons are forced upon the markets, insulting the good soil and the good tree that produced them—a monument of horticultural folly and loss.

2. Almost all orange growers have a few lemon trees—say for their own use—but a small part of the product of one tree will serve this purpose; the balance are sold directly from the trees to some lemon huckster, who, in order to make money out of the transaction, will sell even the blossoms to some perfume manufactory in his haste to get the product on to the market. He does not stop to in any way get them ready, but four bits advance on what he pays authorizes him to push the purchase into the hands of the next man, who, not knowing and perhaps not caring how carelessly the fruit has been handled, and not having the proper facilities for fitting the fruit for satisfactory consumption, says many bad words not complimentary to the "Lemon Interests" of California when his customers return upon his hands the wizened, juiceless lemon, *peas* and *pumpkins*. When the careful grower offers his well-matured lemons to the same purchaser—distance not permitting inspection—he learns that the dealer prefers foreign lemons. One California fruit shipper has notified his customers that our lemons would *not ship*, would *not keep*, and he does not handle them any more. He did not relate his *whole* experience with them, which was that, in order to accommodate those whose oranges he shipped, he took their lemons—gathered perhaps carelessly, regardless of size—stored them away in any convenient place, subjecting them to all sorts of exposure; when ready—not the lemons, but the shipper—grading, packing and forwarding took place, and surely the consignee had the right to complain; and the shipper put the disaster upon California because the fruit would not ship and keep.

3. Many of the lemons grown are produced upon seedling trees, which do not produce good fruit—often rough and bitter, unsatisfactory to the trade and consumer. And one bad California lemon will, in the estimation of the housekeeper whose pie is made bitter by its use, harm the reputation of a carload of good California lemons. Seedling lemons should be budded with the best and most improved kinds of lemons, although seedling lemon trees as a long-lived stock are a failure; yet, if one who has them does not wish to replace them by other trees on orange root, they had better be budded; it will pay for even a few years.

4. Our lemons, before being put upon the market, have been put through different experimental stages, and the result is lack of uniformity in appearance, quality and keeping. As a remedy I would recommend that every grower of lemons assume the responsibility of properly putting his own lemons upon the market, whether one has five or five hundred trees. The conditions for success are inexpensive and simple, and can be summed up as follows: First and always, careful handling should be observed—proper attention to sizing from the tree. After gathering, temperature about 60° or lower. No moisture, no drafts, no light. One can quite cheaply provide conditions keeping these objects in view.

In trying to induce one of the heaviest firms in Chicago to stop the importation of foreign lemons and substitute California—after they had very satisfactorily used some of mine—I was met with an assent to my proposition provided lemons as good as I had furnished were forthcoming; and as their trade required some days several carloads, I was nonplussed and could say nothing—only urge upon all lemon growers to perfect their system of handling lemons so that we could offer our own trade, not only as good lemons, but in such quantities as would

make it an object to replace the foreign with home-grown.

On account of the good qualities of lemons I exhibited in the Horticultural Building at the World's Fair, foreign experts complained to Chief Samuels that the lemons—being so different from what they had known of California lemons—were certainly brought from Italy and exhibited as California grown. Although this was a hard accusation, it was so sweetened by the complimentary admission that the fruit was fully equal to their best that I did not press them to prove the charges.

#### NEEDS OF THE LEMON INTEREST.

To sum up, we need the co-operation of all who take any part in growing, handling, selling and consuming lemons, and only by attention, each one to his work, will the best success be attained.

The demand for lemons being mostly in our hot summer months, and our oranges being all marketed before, the advantages that will come from having a more continuous business in progress, so as to keep our employes at work at home, will be apparent. What then, with the Fruit Exchange, with its business resources at our command, as a proper medium for marketing! Pretty soon dealers will require a few boxes of lemons in cars of oranges. After awhile, if we have the lemons, whole cars of lemons will be in order, and Fruit Exchange oranges will be succeeded by Fruit Exchange lemons. But do not compel the Fruit Exchange to handle poor lemons, or lemons made poor by inattention to the proper details which are necessary to make good marketable fruit.

We may not have the lemons to furnish many cars this season, but the trees are planted and growing finely. Several hundred acres of trees are promising well, and before we have the proper plans matured for handling we will have here in Riverside alone from 1000 to 2000 cars of lemons to go forward.

Just here I should emphasize the wisdom of furnishing the trade with good fruit. We should all honestly regret the Florida disaster, which we are told has especially wiped out her lemon trees; yet while we pause in our labors to extend words of sympathy, the cry will come across the continent for lemons.

Mediterranean ports will ship to our shores her lemons, hardly waiting for a demand. And as in our orange trade, foreign products will swarm around our business marts, and unless we offer as good lemons as the foreigner no amount of patriotism will influence trade in our favor. Quite a large portion of our lemons have to pass through the hands of foreign dealers who have established themselves in business in most of our large cities—led there, perhaps, just to find markets for the lemons then only grown in their own country. It may be that they still have close business interests with their native country; at any rate it is difficult to have those foreigners recognize equal merit of our lemons with the fruit of their own land. Sometimes, it is claimed, our best lemons, after being bought by these dealers, are repacked under foreign brands.

Let no low-priced labor prevent us from doing our duty by the work before us, for as sure as fate this grand country is bound to even up the situation by a proper protection sooner or later.

The use of lemons as a remedy in certain diseases of humanity, being advocated by some of our most eminent physicians, is more proof to confirm the use of the lemon as a necessity. And it is only a question of a little more time when laboratories for the manufacture of citric acid and other chemicals, into which the product of the lemon tree largely enters, will be erected, thus saving more of the fruit, in the line of economy, and assisting the grower in his profits and expenses.

#### GAMBLING IN LEMONS.

May I not wisely say at this juncture, Mr. Chairman, if there are those who have invested in the lemon industry, hoping thereby to receive large returns without giving proper attention to those conditions which alone will make the undertaking successful, the sooner such investors dispose of their interest to those who are determined to push the lemon industry to the front, the better for all. Somehow it seems to me that California is redolent with speculators who put their money in enterprises—reserving the use of brains for something else—because a neighbor makes his investment pay well, forgetting that the money used by his neighbor is but a small part of the undertaking.

As to the future outlook of lemons, so much depends upon the foundation that we lay, so much depends upon the points briefly referred to, of which I have written, that it is safe to say growers of lemons can make or mar results by the course pursued, the methods adopted.

Centuries of experience, fraught with gains and losses, have probably made wise our foreign competitors, and if it is going to take centuries of losses to teach us wisdom, very few would like to continue in the lemon industry; yet I am hopeful of the material of which we are made, the persistency, uplifting efforts of the nation to which we belong, which has pushed us from the bottom to take rank with those at the top. This same push-to-the-top will not suffer defeat or allow much delay in overcoming

the obstacles which may intervene between our present condition and success. Those of us who have lived half a century and more realize the great changes which have surprised the world during that period of time. It is safe to predict that, progress being the order of the day, even our lemon interests will not be behind other enterprises, but take their place above all hindrances and secure for our people some of the millions annually sent abroad for foreign lemons.

*Mr. Blanchard's Views.*—N. W. Blanchard, of Santa Paula, followed Mr. Garcelon. He thought, as reported by the *Press*, the great difficulty here was in allowing the fruit to remain on the trees too long. He thought they should be picked for curing just as they were beginning to color, and possibly a little before. He had patrons who expected him to supply them with lemons at all times of the year, and he usually had them to supply. To keep lemons well they should be kept away from the air. He was attempting to make his lemon trays as near airtight as possible. His oldest trees were twenty years old, and he had never pruned them. He wanted all he could get off of them. He tied the limbs up to keep them off the ground. He thought the smaller lemons were the more saleable and more profitable. There were many things he had not yet learned about lemons, but he was willing to tell what he did know. He had been treating lemons in some ways, and while he got pretty good results and his lemons were in demand over many other lemons, he was not sure that he was treating them just in the best way yet. He was experimenting all the time, and as he learned he would be glad to impart his information.

## FLORIST AND GARDENER.

### Snails or Slugs.

TO THE EDITOR:—What is in a name; that which we call a snail by any other name is just as bad. But there is no need to consider them bad when the right remedy is applied and at the right time. For this I use fresh, dry, slaked lime. The way I slake it is thus: Put some in a box or barrel, pour some water on it, then cover it well so that no steam will escape. After awhile stir it up and add more water if required, but keep in view to have it dry as powder. Always keep it well covered till using, for by this treatment the lime retains its full strength. I try to have it prepared just in time to cool off enough to handle when I am ready to use it. The best time is on a damp night, as then the snails are all out pasturing. I sow it broadcast all over the ground where traces of snails are to be found. Of course it is hardly of any use to apply it just on certain places only or at daytime, for the lime has to reach the snail and not the snail the lime. This lime dust will penetrate everywhere between the plants, etc., and kill the objects on the spot. It requires very little to be effective; next morning it can be showered off, and then hardly any trace of lime will be seen. This treatment may have to be repeated in about four weeks or so, as a young stock, formerly in embryo, must be treated; then the place will be free from this pest.

I also use lime in the same way in the greenhouse, etc., among any plants without the least harm. For this I see that the foliage is dry, so that the lime will not adhere so much. By this operation one has to be very careful and quick and frequently to run out for fresh air. When all the lime has settled shake or dust off the plants and the following morning shower off.

Of course snails will come again (so will weeds), but keep watch for them. It may be years before any will be seen again; to pick them off by hand would keep one in perpetual motion. If one has any pets, as frogs, fish or lizards, they have to be protected, otherwise they share the same fate as the snails.

The same kind of lime, or, better, only half slaked, I use for stagnant or sour ground, especially when infested with angleworms. Digging in a good quantity not only kills the worms, but renews the soil, whereas limewater will kill the worms but keep the soil solid and packed and not improve its condition. For such soil also to bring it in fine condition again, especially clay ground, use, if one has it handy, the hair and lime from tanneries. This will make the soil very loose and rich.

There are still some of the opinion that angleworms are harmless or even useful, as I saw it once stated by Darwin. He said if it were not for the worms the earth would get poorer and barren, as the worms keep the ground open, etc. Now he certainly never cultivated any ground except on paper or else he was mad at not finding any worms in his back yard for his fishing.

A thing very beautiful and useful from one point of view is in another just the reverse. A teacher once showed his scholars the beautiful flowers among the wheat, etc., in the fields which the Lord had seeded down for the enjoyment of mankind; but alas! behind them came the farmer and he expressed himself in a quite different way. So on another occasion



the teacher was explaining how wise everything is created; one could see right over yonder the stork with his long legs with which he could wade in the water and very easily catch frogs for his food with his long bill. Then a boy sang out: "But the frog thinks different, and don't you forget it." Of course both are right.  
HENRY MELDE.  
Eureka, Cal.

## THE IRRIGATOR.

### Irrigation and Distribution of Water with Reference to Wastage.

Paper by WM. IRVING before Farmers' Institute at Riverside.

The subject of the distribution of water, in its relation to agriculture, is, in this country, of very great importance, as its artificial treatment is the principal factor on which the farmer depends for success. Any discussion, therefore, having for its object the conserving or more economical use of water should be of interest to this Institute and to the public generally.

The first question which naturally comes up for answer, in connection with the use of water, is the one of its source, and then follows the related question of its permanence. These questions are frequently asked, and I dare say as frequently answered in many ways.

While it is impossible to determine definite answers to either of these questions, as the particular conditions which determine them are not wholly within our knowledge, at the same time it is just as possible to furnish an answer in a general way, and one that will include the particulars asked for, as it is to answer with reference to the source and permanence of any other physical fact in nature, the existence of which is depending on the operation of natural law.

That the sun is the ultimate source of all the energy found operating on the face of the earth is now accepted as a general truth, and it is to this common source that we must relate the energy of the flowing waters on which we depend for our supply.

It may be taken for granted then without question that, taking the surface of the earth as a whole, the waters of our present flowing rivers, streams and springs will continue to flow in about equal volume while the sun continues to radiate his heat; and to question the truth of this expectation would be to question the very foundations which form the data to which all scientific investigations are referred for their justification.

This being, then, in the main, the source of our water supply, and having perfect confidence that no mere accidental circumstance can ever affect its permanence or average amount, we have to consider what local physical conditions are necessary to our getting our share of the total product.

By referring you to the laws of the expansion of gases under reduced pressure, and a loss of sensible heat during the process of expansion, we account for the fact that our adjacent mountains receive a precipitation about four times as great as falls on the lower lands in this locality. The warm vapor-laden air, in its progress from the ocean towards areas of less pressure, might pass over us continually without precipitating any portion of our share of its contents were it not for the obstruction offered to its further progress by the mountains, which cause it to shunt upwards to a higher plane; and in so doing, it expands under lessened pressure, becomes chilled, and, in consequence, parts with a portion of its vapor in the form of rain or snow, and at such an elevation above the adjacent lands as gives it the potential power referred to.

In the neighboring ranges of Cucamonga, San Bernardino and San Jacinto will be found, because of their elevation above sea level, the principal areas from which a water supply can be gathered; and it is from the time when the natural precipitations take place on these areas that our own efforts may become a factor in determining how much of the total may be applied to the purposes of irrigation.

#### WASTE BY RUN-OFF.

Next to the total amount of rain and snow fall on the mountains, the most important factor is that of the percentage of waste from what Major Powell terms the "run-off" during the life of each storm. The actual percentage of this loss varies for each locality, as their physical conditions vary; and in each locality the percentage varies with the changes which take place in the saturation and temperature of the soil, the rate and duration of the precipitation, the temperature of the air and other causes at the time of each storm. With reference to this, Major Powell says: "The relation which actually exists between the rainfall and the run-off is not only a problem of great scientific interest and value, but to engineers and sanitarians it has a practical importance which justifies the most careful investigation. For several decades there has been no lack of interest in this matter, and the student of the subject finds voluminous discussion and diverse conclusions."

You will be pleased to learn that an investigation of this very important matter is now being carried on by private enterprise in the neighboring moun-

tains of San Bernardino with the aid of such scientific appliances and skilled observers as will endure reliable data of great value in determining local water products.

In the meantime, it is enough for us to know that to-day there is running to waste, past a point on the Santa Ana river, within a few miles of where we stand, four or five times as much water as is carried by all the Riverside canals during the irrigation season. This, of course, is neither a minimum nor maximum flow of waste, the extremes being almost zero on the one hand, during the months of August and September, and reaching forty times the flow of the canals for short periods, during the storm months of midwinter.

By actual measurement made this forenoon, there is at one point in the Santa Ana river over 100,000 inches of water running by. How to reduce this waste is the matter of importance to us here, as representing the general interests, and the first factor having an effect in bringing this about is the condition of the mountain surfaces themselves, as determining the percentage of wasteful run-off during storms.

It is quite a self-evident proposition that, if the rainfall at any time during a storm is greater than the capacity of the surfaces to absorb it, the difference will be the run-off. Any change of the condition of the surfaces then that will increase their capacity for water will be a reduction of this difference, and consequently a gain in the amount saved for future use.

It is now admitted, after extensive observation and experience, that a natural vegetable growth on the surfaces subject to rainfall will naturally tend to the retardation of run-off, and, in addition to this advantage, the evaporation is lessened by the same cause. Very great importance is given to this fact in the many reports of Major Powell to the Federal Government, and it is supported by the opinion of F. H. Newell, the Government Geologist. It is there stated that extensive areas of land in Europe, hitherto yielding remunerative crops, have become entirely barren in consequence of the destruction by fire of the vegetable growth of the mountains, followed by a depletion of the streams from which the lands had been receiving their supply of irrigation water.

I am now, and have been for some time, of the opinion that the destruction of the vegetable covering of our mountains would seriously decrease the total water supply to this valley, and its protection from this fate is a matter of the greatest importance, as affecting the continuity of our prosperity. This is a matter, I think, which comes very properly under the authority of this Institute to recommend such action to be taken by the State and Federal Governments as will preserve the best condition of these mountain surfaces.

#### LOSS IN DITCHES.

We have to consider, after assuming the existence of the main source, how far we can still further reduce the loss in carrying the water to the lands where it is to be distributed. Until recently the waters of our canals were permitted to flow through them without any other provision for preserving the contents than that offered by the natural condition of the soil through which the canals were constructed.

The loss by seepage in such conditions will vary with the nature of the soil, the time the water has been flowing, the ratio between area of cross-section and wetted perimeter, and many other circumstances which enter into and effect the result. The various estimates of loss range from 30% to 70% in newly constructed channels and from 12% to 25% after the same have been used for some years.

From this wide range it will be seen that each locality must be considered with reference to the nature of the soil and other conditions; but never forgetting that generally there is great loss from this cause, which may be prevented if the saving in water will warrant the expenditure. In this particular district, and in connection with the Gage canal, I assumed the loss, in its unimproved condition and when flowing its full capacity, at from 12% to 15%. Taking the maximum amount of flow at 3000 inches, this would represent at, say 13%, a loss of 400 inches. If you value this loss at the rate of \$750 per inch, it will represent the sum of \$300,000.

Of this very large sum it will readily be determined what proportion can be saved by improving the channel. To make this plain and of some practical value to the members of the institute, I may say that the saving of water to the Riverside canals has been considered of such value that large sums have been expended for this purpose, by a reformation of alignment and grant, and then coating the interior surface with Portland cement mortar to the depth of three-quarters of an inch. The proportions of this mixture are one part cement to four parts sand; and, so far as my own experience is concerned, I think we have eliminated the seepage loss entirely, leaving only the loss from evaporation, which, on the average, does not amount to more than a part of 1%.

The farther distribution of the water, from the canals to the lands, can be done without any loss, by means of sealed mains and laterals constructed of vitrified clay, coated steel or iron pipes, and at a

cost varying with the market price of materials, but estimated roughly at from \$13 to \$20 per acre.

#### HOW MUCH IS REQUIRED?

When the water has thus been brought to the land without loss, the still greater question to answer will be, How much is required for successful irrigation? And as an introduction to this I will quote from Newell's report, to show how very open this question is yet considered by men who have given much time and thought to the subject:

Under "Duty of Water" Mr. Newell says: "The duty of water is the ratio between a given quantity of water and the amount of land it will irrigate. It may be variously expressed as the number of acres of land which one second-foot of water will irrigate, or as the number of acre-feet of water required to irrigate an acre of land, or as the total volume of water used during the season. Another form of expression, which is not in common use in this country, but which may be satisfactorily employed when the location of the canal line has been determined, is to state the expenditure of water per linear mile of canal. In India this quantity has been found to vary from six to eight cubic feet per mile. In considering water duty, the fact, however, must never be lost sight of that this differs greatly, according as it is reckoned on the quantity entering the head gates of the canal or on the quantity applied to the land, since the losses by seepage, evaporation, etc., in transporting the water to the land are very considerable.

"It will always be impossible to accurately fix a correct standard for the duty of water, as this quantity varies with different soils and crops and with different climates, altitudes and modes of applying it to the crops. It must, however, be approximately determined for each case before the science of irrigation engineering can reach the high plane attained by other branches of the profession.

"The duty of water as at present accepted in the various portions of the West is a matter of extreme variability and doubt. What the duty of water actually is is being constantly disputed and changed by various engineers in their reports and writings on the subject, and in testimony given before courts. Only during the last ten years has the handling of water for irrigation purposes fallen to the lot of intelligent engineers and experimentalists, and in that time the duty of water in Colorado has nearly doubled, while it has more than quadrupled in portions of California. It is now generally recognized that the duty of water will for some time yet continue to rise as the better modes of handling it are devised and as the amount required by certain soils comes to be understood through experience and practice."

Within a radius of a few miles this judgment varies, with reference to the duty of one miner's inch of water, from four acres to ten acres. Major Powell has claimed that ten inches deep of water covering the whole surface, and used when most needed, will insure a perfect crop of grain. If we compare this estimate with the duties above referred to, we would have as equivalents:

| 1 inch to | 4 acres equals | 43.5 inches deep. |
|-----------|----------------|-------------------|
| " 5       | "              | 34.8 "            |
| " 6       | "              | 29.0 "            |
| " 7       | "              | 24.8 "            |
| " 8       | "              | 21.7 "            |
| " 9       | "              | 19.3 "            |
| " 10      | "              | 17.4 "            |

When the variation in the use of water in about the same locality amounts to over 100% it should be considered an act of wisdom to inquire into the reason why this great difference of opinion which leads to this practice should exist. If a greater amount of water is being used in any locality than is absolutely necessary to bring about the best results, then the excess must be considered a waste and dealt with by this institute as a proper subject for their discussion, and for them to suggest methods by which a better knowledge, leading to a more economical use, can be attained.

I entirely disagree with Mr. Newell in his suggestion that the work of determining this very important matter should be relegated entirely to the general or any other Government. The investigations, leading to a better knowledge in this department of our activities, are of the very highest order. This study is of itself an education and an inspiration to all who engage in it, and to deprive us of the necessity of further study, or to relieve us of the sense of responsibility in connection with it, would be to rob us of much that enters into the daily life of the intelligent farmer.

The Government has already done much to help us in this study and is prepared to do more when the need for it arises, but it is only by a close association, including all the agencies that tend to progress, that the best results can come.

#### DISCUSSION.

W. C. Fuller, of Colton, said it oftener needed an inch of water to three and one-half acres than to ten acres. His was light soil; perhaps different from the soil here in Riverside.

J. K. Woodard said he found all he could do to take care of one inch to five acres and not allow it to waste, and he ran his water very slowly.

J. E. Cutter said there were a great many people who, when they had nothing else to do, would irri-



I have had experience in using wheat and barley mixed and crushed together and find them cheaper and better than barley alone. If crushed, wheat and barley are better than corn for hogs, and I think at present prices it would be more profitable for growers to feed a large proportion of their wheat and market cattle and swine thus fattened. Two hundred and twenty-five pounds of crushed wheat will add one hundred pounds of fat to the hog, if properly fed and watered.



## THE HOME CIRCLE.

## The New Woman.

She talked with great intensity of each man's base propensity, and spoke with volubility of woman's higher plane; She dwelt on domesticity with mental elasticity, and said that such felicity was really quite in vain.

With gestures oratorical and phrases metaphorical, she voiced the powers numerical that woman had untold.

And spoke with zeal dramatical of voting systematical, and ballot boxes spherical and votes not bought with gold.

She said in each vicinity the doctors of divinity would come from femininity; in bloomers they would be;

And matrons with rapidity would lose all their timidity, and no more asininity in Congress would we see.

And while with such audacity she showed her great capacity and talked with great didacticity, her husband learned to sweep; And while with such agility she dwelt on her utility with such intense pugnacity, he put the twins to sleep.

—New York Sun.

## You Can't Improve the Plan.

God bless you, dear, who think you'd be  
A woman known as New;  
Bear with me kindly while I make  
Suggestions unto you:  
For I, in my old-fashioned way—  
I hold it rather clear,  
You can't improve upon the plan  
In which God made you, dear.

Your talk of woman's rights and sphere  
Sounds sweetly from your lips,  
And gestures rather nice appear  
When beauty's diction trips.  
I'd grant you freely every right  
To hold your queenship high,  
And if it leads man's trodden way,  
Shall I protest? Not I.

And yet the sweetest right of all,  
I'd have you hold it fast,  
The right to rule by woman's grace  
Where home's lovelight is cast  
O'er faces smiling back to you—  
Walk where your duty's clear.  
But know you can't improve the plan  
In which God made you dear.

N. B.—If the intelligent compositor leaves out the comma before the last word of the foregoing, he shall die.

A. J. W.

## Miss Thankful's Party Bag.

It seemed to be one of the ironies of fate that her name should have been Miss Thankful Hope. Strangers smiled instinctively at the name when they first met her. For to them there was so little in her narrow life to be thankful for and nothing to hope for. And yet to those of the limited number who grew to know Miss Thankful the name was quite appropriate.

At 404 Somerset avenue, the second-rate boarding-house where she lived in room 14, second floor back, Miss Thankful was accepted year after year as one of the belongings of the place; much as the hot-water bags for extra cold nights and the dessert every Wednesday and Sunday were accepted; settled facts of the house of so long standing that they were never questioned.

She was a faded-looking little woman of 45, whose plain face was only redeemed by a pair of smiling brown eyes. She was a day seamstress and made enough to pay her board and usually to keep herself suitably clothed.

It was a standing joke among the other boarders that no matter how disagreeable the day Miss Thankful could always find something pleasant to be said about it. And no matter how unprepossessing the last new boarder Miss Thankful's kind heart was sure to discover some excuse.

Other boarders came and went—"transients," Mrs. Simmons called them—but Miss Thankful stayed on.

For thirteen years she had been an inmate of the house, until now she felt that no place would be home to her but the tiny 12x12 room, where she had spent her evenings and Sunday afternoons for so many years.

She had watched Florence, Mrs. Simmons' young daughter, grow up to womanhood and had shared her timid confidences and opinions about the different young men of the house—confidences which Florence would never have thought of telling her practical mother. There was something about

Miss Thankful which invited confidence and the two were warm friends.

It was a dull February evening; a slight snow was falling and Miss Thankful hurried along toward home in the early dusk. The windows were lighted up and presented a tempting array of millinery, dry goods, flowers and confectionery.

But Miss Thankful did not notice any of them until she turned into Bond street, and there she walked slower, coming to a standstill at last in front of Cooper & Cooper's large dry-goods house.

She smiled as she looked in at the window. "Yes," she said softly, "it's there yet, I made sure it would be sold. So cheap, too; only \$1.50." She was gazing at a blue satin party bag, lined with delicate pink, one of those dainty French affairs which always catch a woman's eye, if she has any soul for pleasing effects.

"I can't afford a new dress this year. That three weeks I was sick last month put that out of the question, and so it does seem as if I could buy that bag if I want to. Only it would be silly—downright silly!" and she sighed.

"I never had anything as pretty as that. Maybe that's why I seem to have set my heart upon it. Even my dresses have been brown and black—they last better.

"I've had a kind of a brown and black life anyway. But there, now, that sounds complainin', and I've no cause to complain. The Lord's been good to me and prospered me right along."

"Good evening, Miss Thankful," said a cheerful voice at her side. "Right nice window. Our trimmer beats any in town. Lots of pretty things, too," he added, with the pardonable pride of a head clerk.

"Goodevening, Mr. Jones," answered Miss Thankful. "Yes, I was just looking in at all the goods. I"—she hesitated—"was just noticing that blue satin bag over there in the corner—see?"

"Oh, yes, that party bag; pretty thing; very cheap, too. I know a good piece of satin when I see it. Funny it was not sold to-day—will be to-morrow likely."

Miss Thankful felt her desire to possess the bag increasing.

"On your way home? Let me take your umbrella," and they walked on together.

Miss Thankful had a decided liking for this one of the boarders. Partly because he never forgot to show her the same courtesy that he would show to Florence or any younger woman. And this is very gratifying to a woman who has no claim to youth or beauty.

He was a timid young man with a colorless mustache and drab hair, who talked with a jerk, but Miss Thankful always liked him.

When they reached the boarding-house she went very thoughtfully up to her room. Mr. Jones had discoursed most of the way upon the amiable qualities Florence possessed, all of which remarks she had heartily seconded. When she had lighted the gas she sat down with the thoughtful expression still on her face.

"I wonder," she said; "I do just wonder. But he would never under the shining sun have the courage to tell her," and she smiled.

"Mr. Jones; a name I do abominate! And Florence so pretty—and him with those colorless eyes and that washed-out hair! But then he is just as kind as he can be, and I make no doubt would be a good provider."

The next night when Miss Thankful came into her room she turned on both the gas jets—an unheard-of extravagance. She carried a small parcel done up in tissue paper, and before she stopped to take off her bonnet she went over to the bed and untied the package. It was the blue satin party bag.

"It's a lot prettier than it was at the store," she said, smiling at it where it lay spread out on the white cover in all the arrogance of assured beauty.

"Those pink rosettes are lovely. I'm silly as I can be, I know that well

enough! That's why I asked Mr. Jones not to speak of my getting it. Maybe next summer I can have a lawn with a little blue sprig in it. This would go beautifully with that. I don't think I'm too old for a lawn on a hot day, and I'm just glad I got it—so there!" Then she wrapped up the bag and put it away in her trunk.

After supper Florence came up to visit her and Miss Thankful was tempted to tell her all about it. But she was full of her own plans and the bag was not mentioned.

"There is to be a party to-morrow evening at Mary Moor's. It's the 14th, you know," said Florence, happily. "I am going to wear my blue cloth dress. I've worn it a lot, Miss Thankful, but mother says I may have a new sash that will freshen it up. But oh! I wish—I do wish—I could have a big party bag that I saw down in Cooper's window. It was light blue and lined with pink—such a beauty! I wish you had seen it. I can't have anything but the sash, though, and so there is no use in wishing."

"I did see it," said Miss Thankful, "and it was pretty. I sorter wished for it myself."

Florence laughed. "Oh, of course, you would not want it, but if you had seen it twenty years ago you might have," she said, with the serene thoughtlessness of youth.

Miss Thankful grew silent.

"Mr. Jones has asked me to go to evening service twice lately," she went on presently.

"I think he is about the best-looking young man here, don't you, Miss Thankful? He never talks much, but I suppose he thinks a great deal. I used to think he disliked me, he stammered so whenever I spoke to him, but I guess it was just because he didn't feel acquainted." And then followed a recital of Mr. Jones' sayings.

After she had gone, Miss Thankful sat for a long time in front of the grate with sad, dreamy eyes fixed on the fire. She was going over in her mind a time twenty-five years before.

"He was nothing like Mr. Jones," she said. "He was good-looking and so tall, but he was just as timid, and I acted as careless and indifferent as I knew how. Girls are foolish creatures. He never got up enough courage to tell me. And then we moved away and that was all. No other man ever looked at me, and I can't say as I wanted them to."

She undressed slowly. She felt old. This looking back at one's youth has a tendency to make one feel old if it lies twenty-five years behind one.

When she was all ready for bed she opened the trunk and took out the party bag.

She opened the door and listened. Everything was still in the dim hall. Florence's room was only a few doors away. Miss Thankful slipped noiselessly along; and when she reached the door, she hung the ribbon over the knob and as softly stole back.

She had put no card in the bag—there was no need. Florence would know who sent it. And then she went to bed and to sleep.

The next morning Florence knocked at the door almost before Miss Thankful was dressed and came in with a flushed, happy face.

"Oh, Miss Thankful!" she cried, "I have had the loveliest gift; what do you think—that blue, satin party bag!"

"Of course Mr. Jones sent it. I asked him last night if it was sold yet, and he grew just as red and stammered so, I know why now. Mother says I may keep it, and I wrote him a note of thanks this morning and put it under his plate. That was the easiest way of thanking him. He is having an early breakfast now, so I thought I would wait and go down with you this time." And she fluttered about the room in happy excitement.

Meanwhile Mr. Jones was in a very uncertain and puzzled state of bliss. The note had thanked him for his beautiful gift, but neglected to tell what the gift was.

He left the house without being able to get a glimpse of Florence.

At noon there was another tiny

missive under his door. But this, much to his disappointment, proved to be from Miss Thankful.

"Dear Mr. Jones," it read, "Florence thinks you sent that satin bag. It would be dreadful for her to know differently after thanking you for it. For her sake please do not ever tell her that you did not. Your friend, "Thankful Hope."

Mr. Jones studied this note with smiling eyes.

"For her sake"—that clause gave him a quick thrill of pleasure. She would be sorry to find out, then, that it was not his gift.

He must answer Florence's note, and this was the result of a half-dozen attempts:

"Dear Miss Florence: That bag could not hold the valentine I would like to give you if I dared. It is the biggest and homeliest valentine a young lady ever got. If you care to have me tell you about it, please carry the blue satin bag when you come down to dinner. Erastus Jones."

He could hear Florence singing in her room, and he called the bellboy and sent the note to her.

"There now," he said when this had been accomplished, "if it had not been for Miss Thankful I would never have had the grit to send that. And, what's more, I believe Miss Thankful knew it. Bless her!"

"If Florence does have that blue thing on her arm I'll give Miss Thankful the very best black cloth dress that Cooper & Cooper have in the store."

And Miss Thankful got the dress.

## At Their Best.

The moving minds to-day in art, literature, journalism and government are those of men and women much nearer fifty than thirty. A real man or woman is barely ripe at forty. Again there are "old fogies" of either sex under thirty—people who have already begun to dislike innovations, new customs and new fashions, and want to live more and act in the set fashion in which they have been brought up, believing it to be the only correct thing, because it is the only style, custom or usage they have known in the very short time they have existed.

These are usually the people who, withering and decaying themselves, find a kind of morbid satisfaction in raking up the number of years that other people's bodies have existed, and who throw up the taunt of "venerable" or "the ancient so and so" at those who, if double their own age, have in many cases double the amount of energy and physical or mental vigor.

Probably the time will come, however, when it will be counted as a sin, if not a disgrace, for a man or woman to grow into that kind of old age when both body and mind decay; when memory goes, and they become only feeble, tottering, wornout frames, with just enough of mind using those frames to keep a mockery of life about them. Like many other things, the old age of decrepitude, senility and silliness is not always to be because so far as we know it always has been.

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•DR•

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MOST PERFECT MADE.

A pure Grape Cream of Tartar Powder. Free from Ammonia, Alum or any other adulterant.  
40 YEARS THE STANDARD.



## Always Glad.

When he opened his eyes each morning,  
He was glad to be awake;  
He was glad when called to breakfast,  
And ready his place to take.

He was glad to hear the school bell,  
And glad when called to his class,  
For he always had his lessons,  
Whatever might come to pass.

He was glad at recess and noontime,  
And always on hand for play;  
And glad to be going homeward,  
When school was closed for the day.

He was glad to help his mother,  
And frolic with little Fred;  
And when he was tired and sleepy,  
He was glad to go to bed.

—Delia Hart Stone.

## Gems of Thought.

To be desirous of a good name, and careful to do everything that we innocently may to obtain it, is so far from being a fault, even in private persons, that it is their great and indispensable duty.—Atterbury.

In forming a judgment lay your hearts void of fore-taken opinions, else, whatsoever is done or said will be measured by a wrong rule, like them who have the jaundice, to whom everything appeareth yellow.—Sir P. Sidney.

Give not thy tongue too great a liberty, lest it take thee prisoner. A word unspoken is like the sword in the scabbard, thine; if vented, thy sword is in another's hand. If thou desire to be held wise, be so wise as to hold thy tongue.—Quarles.

As all error is meanness it is incumbent on every man who consults his own dignity to retract it as soon as he discovers it, without fearing any censure so much as that of his own mind. As justice requires that all injuries should be repaired it is the duty of him who has reduced others by bad practices or false notions to endeavor that such as have adopted his errors should know his retraction, and that those who have learned vice by his example should by his example be taught amendment.—Dr. S. Johnson.

Show yourself, upon all occasions, the advocate, the friend, but not the bully, of virtue. Col. Chartres, whom you have certainly heard of (who was, I believe, the most notorious blasted rascal in the world, and who, by all sorts of crimes, amassed immense wealth), was so sensible of the disadvantage of the bad character that I heard him once say, in his impudent, profligate manner, that though he would not give one farthing for virtue he would give ten thousand pounds for a character, because he should get a hundred thousand pounds by it: whereas he was so blasted that he had no longer an opportunity of cheating people. Is it possible then that an honest man can neglect what a wise rogue would purchase so dear?—Lord Chesterfield.

There are, indeed, but very few who know how to be idle and innocent or have a relish of any pleasures that are not criminal. Every diversion they take is at the expense of some one virtue or another, and their very first step out of business is into vice or folly. A man should endeavor, therefore, to make the sphere of his innocent pleasures as wide as possible, that he may retire into them with safety and find in them such a satisfaction as a wise man would not blush to take. Of this nature are those of the imagination, which do not require such a bent of thought as is necessary to our more serious employments, nor, at the same time, to sink into that negligence and remissness which are apt to accompany our more sensual delights, but, like a gentle exercise to the faculties, awaken them from sloth and idleness without putting them upon labor or difficulty.—Addison.

Recently a court in New York decided that money dropped upon the floor of a street car, although by falling between the slats of the wooden mat it had become entirely hidden, was a lawful tender of fare, which the conductor must not only accept, but supply the required change.

## Fashion Notes.

Ribbons are shown in the same effects and patterns, but moire, satin and plain gros grain will continue in use.

Crepon gingham are neat for gowns to be worn in the afternoons, and simply trimmed with open embroidery or left untrimmed. These are of three shades alternating with a similar stripe of higher shades.

In spring millinery flowers have apparently reached a high state of perfection. These, however, are not the only ornaments: feathers, ribbons and lace are combined with jets or iridescent effects to produce a thing of beauty.

The bonnets are so trimmed as to have the broad effects already indicated by the later winter styles. Novelties in straw are introduced in head wear, but jet holds its own with remarkable favor, and it is really a beautiful bonnet with tasteful combinations.

The new straw hats come in every imaginable tint. There are dark greens shading off to the palest tea; ruby red to faint shell pink; deep purple to lightest mauve. The straws are either very light and rough, or are woven "a jour"; and almost all have large waved brims. The bonnets are merely flat little triangles or circles in front, with straw supports for bows or other trimmings at the back.

While the very big sleeves are in vogue—and though there is a promise of their reduction, they still are roomy—so long as women wear the big sleeves, so long will they be glad to wear also the pretty little full capes that are so convenient to put on, and which do so little damage to puffs and frills. These capes are not long, but are very full, and usually are lined with a handsome silk or satin which shows between the ripples of the cape.

## Telling a Person's Age.

The following is a somewhat novel way of amusing yourself and friends, and at the same time give them the idea that you are very clever. By complying exactly with the rules given the age of any person, and the month in which he was born, may be ascertained:

First, you ask him to go to the other end of the room to prevent your seeing what he is going to write; then you ask him to put down the number of the month in which he was born and multiply it by two; then add 5 to the sum, and multiply by 50, add his age to the quotient, then deduct 365 and add 115 to the difference.

Suppose he is 49 years of age and was born in February, the computation might stand thus:  $2 \times 2 = 4$ ,  $+5 = 9$ ,  $\times 50 = 450$ ,  $+49 = 499$ ,  $-365 = 134$ ,  $+115 = 249$ . The last two figures indicate the age, viz., 49, and the first figure, 2, February—the second month of the year.

You simply ask the person to state the result of the calculation, and declare that he was born in February and is 49 years of age.

## Curious Facts.

A Russian economist estimates the annual cost of the armed peace in Europe at \$2,000,000,000. How vastly less expensive it would be to maintain an unarmed peace!

It is said that there is to be found in the old furniture and curiosity shops of Boston enough furniture that was taken from the Mayflower to fill a whole fleet of such primitive crafts.

Wheat can be grown in the Alps at an elevation of 3600 feet; in Brazil at five thousand; in the Caucasus at eight thousand; in Abyssinia at ten thousand; in Peru and Bolivia at eleven thousand.

Lake Erie was named by the Iroquois Eriake, from a fierce tribe living on its shores. The French call it Raccoon lake, and on the various old maps it appears as Lac de Conty, Lac Herrie, Lac Erie, Lac Eriolise or Erietz.

## DOMESTIC ECONOMY.

## Domestic Hints.

**LEMON PUDDING.**—One pound of sugar, one pint of cream, ten eggs, a little mace. Peel and juice of two fresh lemons. Line deep plates with a nice paste, turn in the mixture and bake.

**CHOPPED POTATOES FRIED.**—Chop cold boiled potatoes and season them with a little pepper. Fry a slice or two of pork crisp in a spider, then take it out and put in the potato and brown it.

**OUNCE PUDDING.**—Six eggs, six apples chopped fine, six ounces of bread crumbs, six ounces of currants, six ounces of sugar, a little salt and nutmeg. Boil two hours and serve with wine or lemon sauce.

**COFFEE CAKE.**—One egg, one cup of molasses, one cup of melted butter, two cups of brown sugar, one cup of strong, clear coffee, five cups of flour (reserving a little to flour the fruit), one teaspoonful each of soda, cinnamon and cloves and one nutmeg grated, one cup of currants and two cups of raisins seeded and chopped. Mix in the order given and bake in one loaf.

**CRULLERS.**—Three-quarters of a pound of sugar, one-half a pound of butter, six eggs, a pinch of soda dissolved in a spoonful of milk, the juice of one lemon and flour enough to roll out. Roll the dough one-quarter of an inch thick. Cut in pieces two and one-half by three and one-half; then beginning one-third of an inch from the top, cut into five strips. Take up every other strip, fold each strip slightly in the middle, and drop them into boiling hot fat.

**A VEAL POT PIE WITH DUMPLINGS.**—Take a scrag or breast neck of veal and cut it into slices an inch thick. Fry out several slices of salt pork in a kettle. Remove the pork, flour the veal, brown it on both sides in the fat. Add hot water just enough to cover the meat. Let it simmer about half an hour, then season it with pepper and salt and dredge in a little flour. Let it cook gently till tender. Dumplings—One cup of flour, one even teaspoonful of baking powder, half a teaspoonful of salt and sweet milk to make a batter stiff enough to drop from a spoon. Drop by the spoonful into the boiling stew, and cook fifteen minutes without lifting the cover. Take out the dumplings, put the meat into the center of a hot platter and the dumplings around the edge.

**FRIZZLED BEEF WITH HORSE-RADISH.** Take half a pound of smoked beef, cut it in thin shavings. If you buy the beef shaved, remove all the fat and stringy parts, and pick up the beef in small pieces. Put one tablespoonful of butter into a small frying pan when hot, add the beef and cook four or five minutes, stirring constantly with a knife. Set the beef over the teakettle, where it will keep warm, while you make the following sauce: Put one tablespoonful of butter into a small sauce pan; when hot add one teaspoonful of flour, and stir quickly until it is well mixed. Be careful not to brown it. Add gradually a cup of warm milk, stirring it constantly until smooth and free from lumps. Then add a teaspoonful of pickled horse-radish, thoroughly drained from the vinegar, half a saltspoonful of sugar and a dash of cayenne pepper, and, if you like, half a saltspoonful of made mustard. Let the sauce cook slowly ten minutes, add the beef and serve at once. The beef ought to make it salt enough, but

it is better to taste it after adding the beef, when more salt can be added if desired.

## Hints to Housekeepers.

Raisins for fruit cake are very much improved by cooking. Let them soak out slowly, and then simmer until the skin is tender.

By rubbing with a flannel cloth dipped in whiting, the brown discoloration may be taken off of cups which have been used for baking.

When a stain gets on the fresh dinner cloth the easiest way to remove it is immediately after dinner to slip a bowl directly under the spot, thus raising the cloth from the table, and then to pour boiling water over the stain. Let the cloth remain stretched over the bowl until the wet portion dries.

Mrs. Emily Bishop, the well-known writer and speaker, in a recent lecture on dress, said that the one great reason for the failure of dress reforms in the past has been their disregard of grace and beauty. A clever woman once said to her that any girl would rather be uncomfortable and look nice than to be comfortable and appear odd or gawky.

Many women imagine that a bare floor scrubbed every day or two is the only "neat way of living," but the woman who covers her kitchen floor with a hemp rag carpet, protected in the most exposed places by neatly bound oilcloth, saves much exhausting scrubbing, and her kitchen looks cleaner than the floor, dingy and rough from frequent washing. Almost always the freshly washed floor is the real cause of those mysterious languid, lame sensations from which delicate women suffer.

## Humorous.

A pious old lady recently sent us a silver-wedding present of a pair of flat-irons, a rolling-pin and a motto worked on cardboard reading: "Fight On."

Hardup (scribbles)—"My dear fellow, couldn't U lend me a V?" Wiggins (scribbles below)—"My boy, you must think I am a J!"—Harper's Bazar.

After the concert: He—"I envy that man who sang the tenor solo." She—"Why? I thought he had a very poor voice." He—"So did I. But just think of his nerve!"—Life.

Mrs. Knervz rang the bell for the domestic. "Norah," she said, when the kitchen lady appeared, "I'll feed the canary myself after this. The doctor says I must take more exercise."

He—"Perhaps you are aware that most of the great inventions of the world are conceived by men." She—"Oh, they are driven to inventing. They haven't any hairpins to do things with."—Indianapolis Journal.

"It's all nonsense, dear, about wedding cake. I put an enormous piece under my pillow and dreamed of nobody." "Well?" "And the next night I ate it and dreamed of everybody!"—Life.

Clara—"He has proposed three or four times, and I don't know whether to accept him or not." Maude—"I would. Suppose he should stop?"

A young lady had given a spruce young man her photograph. He was enamored with it, and made the remark: "Some day, with your permission, I shall plead for the possession of the lovely original." He did not expect this: "Then I shall give you the negative."—Tit-Bits.

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## Patrons of Husbandry.

### Inspection at Grimes.

TO THE EDITOR:—For a week or more the prospect of this scribe going to Grimes Grange inspection hung in the balance, owing to the indisposition of certain limbs that insisted on going with the procession. The fair weather preceding the appointed day gave encouragement of all being well—that the prevailing rheumatics would quietly subside for at least one day's outing. Friday night threw out some frowns, and lo and behold! Saturday morning it was sprinkling. And a twenty-five-mile ride in contemplation! The puzzle of the moment was soon solved by the appearance of Brother Shoemaker around the corner, behind a spanking team and with a well-covered rig that rendered the interior as dry and as comfortable as a parlor. Forgetting all other discomforts we were soon on the way westward across Sutter county towards Colusa county. The village of Grimes, our destination, is situated on the west bank of the Sacramento river, about twenty miles due west from Yuba City. The stretch is intercepted by an extensive tule basin, which during several winter and spring months is covered with water. This being the case at the present time, it compels a deflection northward along the base of the Butte mountains, which stand at the head of the Sutter tule basin. Thence our course lay west until we struck the Sacramento river at the village of Meridian; from there we went down the river some eight miles, where we crossed over on a ferry owned by Brother A. A. Thayer, of Grimes Grange. Once over, a short drive brought us to the handsome and commodious residence of Brother and Sister W. W. Kilgore, well-known members and visitors at the annual meetings of the State Grange. We arrived at noon, having enjoyed a gentle drizzle for at least two thirds of the way—a distance of twenty-five miles, at least. I have been somewhat particular in describing the route, because later on I propose to say something of the country and the people, if the narrative does not exceed permissible limits. It is needless to say that the Inspector and his pal were instantly recognized on our arrival, and as we approached the outer gate of the Kilgore's we literally fell into the arms of parents and children.

The meeting of the Grange had been fixed for two o'clock, hence we had ample time for rest and recreation with our hosts. Meantime the sprinkle had subsided and the sun flashed forth its warm rays, causing all Nature to rejoice and feel glad.

In due time we entered the hall, and whom should we meet but State Deputy and County Deputy, Brother and Sister Frisbie, and Sister J. R. Heddon who had recently arrived from an opposite direction by a still more devious route. The morning showers had deterred many from coming, doubtless under the impression that no meeting would take place; nevertheless there was a good attendance of as zealous and loyal Patrons as ever convened. At the proper moment the Inspector and his aids were received in formal order and introduced with appropriate remarks. After a pause the inspection services were executed in a creditable manner, resulting in an excellent showing for the Grange. These ceremonies concluded, the Worthy Lecturer, Sister Kilgore, propounded the following question for discussion: "What has the Grange accomplished?" or words to that effect.

Now, having secured the presence of one of the central luminaries, Brother Shoemaker, Inspector, and also Steward of the State Grange, we all expected light on a supposed dark subject, and if anything remained to be elucidated we had Brother Frisbie, who had been a State Deputy since Washington crossed the—the—Susquehanna, or Sherman marched through Michigan. But, instead, they conspired to have the visiting sisters called first—Sisters Frisbie and Heddon—who told their story in an easy

and becoming manner, and for which they received due applause.

Now, again, we were ready for the solid food from the brothers named, but, instead, the manipulators let themselves down on the devoted head and shoulders of the pain-stricken dude who penned these lines. The question at once revolved through my brain like a wheel, "What has the Grange done?" And again, "What has it done for me?" The thought came at once that the answer to the latter question, after the ride, will come in due time, and was already giving hints.

Nevertheless he thought of some very good movements on the body politic that had originated in the Grange, such as placing the creature beneath the power of the creator, as in the celebrated Granger cases in Chicago, where corporations denied the power of the State to regulate charges. Again, through the efforts of the Grange the farmers of the country had secured a representative in the Presidential Cabinet. Continuing, he said Patrons of Husbandry had been leaders in all legislation affecting their calling, such as pure-food measures and the protection of their industries.

Referring to the vicissitudes of farm and Grange associations, he contended that the Grange was never so strong and active as when it had a foe to face. Its social features and advantages are its mainstay, and are approved by all within or without the Order. Nevertheless the active, rushing, business farmer regards this feature as pie without the solids. Following up his views, he said that the depressed and depressing condition of affairs was a foe worthy of our closest and combined attention. The California farmer is widely separated from his brothers of the East, and yet, from all accounts, the depression there is equal to ours. There is no place we can go to better our condition, hence it is necessary to remain, be content and fight it out on lines laid down by the fathers of our noble Order, which is in part:

"To enhance the comforts and attractions of our homes, and strengthen our attachments to our pursuits. \* \* \* To reduce our expenses, both individual and corporate. To buy less and produce more, in order to make our farms self-sustaining. To diversify our crops and crop no more than we can cultivate."

Continuing, he contended that we should meet together, talk together, work together, buy together, sell together, and learn from each other how best to proceed against our common foe, low values and hard times.

It was the age of organization and discipline, every calling and every industry is managed by a central power, which the farmer must emulate or he is driven into a career from which there is no escape.

Having concluded his remarks, Bro. Shoemaker favored the audience with one of his best speeches on the subject under consideration, calling to mind numerous benefits derived through Grange influence and which would look well in print if I could give it. At 5 p. m. the assemblage adjourned to the banquet hall below, where the usual bountiful feast engaged the attention of the multitude for an hour, after which a free and easy chat preceded the final leave-taking. The meeting was voted a gratifying success in every way.

A dozen invitations to change our evening lodgings were received and reluctantly declined on account of previous engagements, which also included the Frisbie party, so that all were domiciled for the night at the hospitable home of the Kilgores, where the evening was spent most pleasantly and profitably to all.

On Sunday morning a drive was arranged about the vicinity, and at 12 m. we took our leave and drove northerly to a point opposite Meridian, where we were ferried over to the Sutter side and from thence returned home by the same route we had come, the weather having settled to a cool breeze and pleasant sunshine.

Now a word about the country.

Every step of our drive was over the domain of some prosperous farmer. In isolated sections the excessive rainfall of the wet season had left its mark by showing bare spots that had been drowned out. These were being rapidly obliterated with the plow, some doubtless to be sown, while the remainder is to lie over in fallow. On all land not so affected—and it seemed almost the rule—the finest crops were seen.

There was a wide difference as to size, ranging from four feet to six inches in height, yet without exception, all had a dark green color, the smaller having been sown later on naturally moist soil, which will require little, if any, more rain to make as good a crop as ever was grown.

Much of the earlier sown barley is headed out, and many fields stand as high as the fences. The same story applies to both sides of the river, as well where not seen by us as the ten miles through which we rode.

The prospective hay crop of alfalfa and volunteer grain is equally as heavy and promising as the grain.

Many fields are being planted to Indian and Egyptian corn, which seem perfectly at home in the section, being the locality whence came the news last harvest that thus and so had secured from thirty to fifty sacks of grain per acre. This wonderful river country must be seen to be appreciated. My pen pales over the attempt.

And last, but not least, what shall be said of the palatial residences overlooking the river every few rods on either side, the magnificent farms as a background, flanked on either side by the choicest fruits of the valley. Nearly all the dwellings are two-story; and, judging from their bright colors, one would think they had all been constructed within the period of the depression.

Of course, the cattle and horses are numerous and sleek, and thousands of swine of the latest strain are living in luxuriant alfalfa. Why, those fortunate residents did not know of hard times until they were told. Thanking all for their persistent kindness, I must cease writing to secure space.

GEORGE OHLEYER.

Yuba City, April 15, 1895.

### Inspection Day in San Jose Grange.

TO THE EDITOR:—The large hall of San Jose Grange was filled with members of the Order, several coming from distant Granges to witness the inspection service to be conducted by Bro. John L. Beecher, of Stockton Grange, and withal to have a good time generally, and it is believed that no one went away disappointed. After the usual introduction and a declination on his part to occupy the Master's chair, Bro. Beecher with pencil and paper in hand seated himself at a desk on a raised platform ready to note down the errors of omission and commission and incongruities, if there were any, in the exemplification of the secret work by the Worthy Master, G. W. Worthen. In giving it Bro. Worthen was as near perfect as could be, so near that the Inspector called his attention to only one error. But our Worthy Master had precedent since time immemorial on his side. We all felt proud of him for passing through the fiery ordeal unscathed. The third degree was then conferred on a class of four, the feature of which proceeding being the return from the fields, after a day's toil, of probably one hundred merry harvesters laden with the product of their labor. They entered the hall to the inspiring strains of martial music, as near as it could be produced on a piano by the magic touch of Sister Jeffers, and being under the able leadership of grand marshal Bro. Holland, who discharged his duties with the air of a veteran of many wars. Their marching and countermarching was interesting at all times and often quite bewildering to those who occupied the position of "Lookers-on in Vienna." The sound of tramp, tramp, tramp, as it echoed through the hall; the music; the seemingly inexorable confusion of those in the ranks under the direction of veteran Holland—all formed a panorama that

will not be forgotten by those who witnessed it. In the ranks were seen men who wore the blue and the grey in years ago, being engaged at that time in a deadly conflict, but who are now engaged under the banner of the Grange in the more peaceful pursuit of making the life of the tiller of the soil more agreeable, if not happy. It was quite noticeable of the veterans of the blue and the grey, when marching to the inspiring strains of martial music, that they marched with a firmer step, stood more erect and, in fact, looked younger than is their wont when engaged in the routine duties of their daily avocation.

This feature of the exercises being concluded the tables were loaded with the goodies of life and the inevitable harvest feast followed. The holding capacity of the granger is surprising; it equals that of the average twelve-year-old boy with a basket of green apples before him. After 100 or 150 persons were made happy through the nerves of their stomachs, the tables were cleared and a short literary programme was had, composed of a piano solo by Miss Jeffers, recitation "Good Night, Papa," by Mrs. Amos Adams, vocal solo by Miss Tenny and recitation by Miss Glendening.

Then the critic for the occasion, Bro. Beecher, was introduced and he gave us a good sound logical discourse on the benefits of the Order, and closed by expressing his admiration for the Order as exemplified by San Jose Grange. On motion of Bro. Amos Adams a vote of thanks was extended to Bro. Beecher for his very favorable criticism of our Grange and for the manly and straightforward talk given to us.

Bro. E. F. Adams, Worthy Master of Highland Grange, being present, was called on for remarks. In response Bro. Adams elucidated a plan for a

#### SUMMER ENCAMPMENT

In an interesting speech, substantially as follows: Among the objects set forth in the official declaration of the Patrons of Husbandry, that of education of its members is deservedly prominent. Less important perhaps, but equally desirable, is a slight relaxation from constant toil to partake of recreation and social intercourse.

General expressions necessarily used in a formal declaration are meaningless, except in so far as they are made effective by concrete acts tending to the proposed results.

It is the experience of all popular organizations which prove their fitness by survival, to be originally promoted by enthusiasm and recruited largely by those seeking the unattainable.

The enthusiastic beginnings are

## Neuralgia

ATTACKS THE EYES

Makes

THE LIGHT

Unbearable.

PERMANENTLY CURED

BY USING

**Ayer's Pills**

"My husband was subject to severe attacks of neuralgia which caused him great pain and suffering. The pains were principally about his eyes, and he often had to remain in a darkened room, not being able to stand the light. Ayer's Pills being recommended, he tried them, using one before each meal. They very soon afforded relief, followed by permanent cure. I am a strong believer in the efficacy of Ayer's Pills, and would not be without them for ten times their cost."—Mrs. M. E. DEBAT, Liberty, Tex.

"I have used Ayer's Pills in my family for forty years, and regard them as the very best."—Uncle MARTIN HANCOCK, Lake City, Fla.

**AYER'S PILLS**

Received Highest Awards  
AT THE WORLD'S FAIR



followed by a certain disappointment and depression, upon the experiences of which are laid the foundations of solid and enduring structures.

If he had been correctly informed, the Grange in most Eastern States has passed through all these stages and has now reached the position of conservative strength and influence which the founders hoped for but which all did not see. We in California have passed through the first and second stages and, unless present indications are deceptive, we may now be entering on our third and a more glorious period. If this be the case, we are about to begin the effective doing, one by one, of the useful things which we are organized to do, but which we have thus far not accomplished. We may be assured that as the Grange is seen progressing in the actual accomplishment of all the objects set forth in our declaration, we shall have no lack of membership, attendance, friends, influence, and income.

He believed that what the membership most needs is a greater amount of accurate information and that practical discussion upon it which comes by mingling not only among ourselves, but with other classes of men and women, will bring to our discussions the advantage of different points of view and different experiences.

He remembered when a young farmer, influenced by old farmers, he derided the notion that any scientific book man could teach him anything about farming. This was the general sentiment among farmers where he lived.

We have all got past that period now and are eager to learn and to profit by the lessons of agricultural science.

But there is another science which touches the lives of all men, upon which he thought farmers are not so well informed as they might be, or as they should be. There is nothing upon which farmers' organizations and meetings are more prone to declare themselves than upon economic subjects, and he was free to say that he believed farmers needed more information on those topics than upon any other. For himself, he confessed his own ignorance and desired more light.

It had occurred to him that it would be wise for the Granges of this State to follow the example set by Eastern Granges and organize summer encampments of recreation and instruction on practical topics specially affecting farmers' lives.

He had suggested the idea to the professors of the Department of Agriculture of the State University and the Department of Economics at Stanford, all of whom assured him of their hearty co-operation and support provided that the matter be taken up formally by the Grangers or a Grange and exclusively managed by them.

Bro. Adams disclaimed the thought of antagonizing Chautauqua courses or Farmers' Institutes, held at agricultural experiment stations for the study of agricultural topics, but he recognized the fact that hundreds of farmers camp every summer, and more would do so if they could make their recreation more enjoyable by joining with it instructions and discussions on suitable topics. He was satisfied that hundreds would attend such gatherings with their families who would never be heard from in any other way and that Santa Cruz mountains combined all the conditions requisite to make a summer encampment a perfect success. In conclusion, he said he was commissioned by Highland Grange to request San Jose Grange to take the leadership in the movement and to appoint a committee—the larger, the better—to visit Highland Grange on Friday next, at which time the third and fourth degrees will be conferred. Then they can examine the proposed location with a view of reporting conclusions to San Jose Grange. The plan, he insisted, was entirely feasible even in these hard times. The details have been fairly thought out and will be presented to the committee should one be appointed, and in due time will thus come before the Grange for discussion.

The plan here outlined was favorably

commented upon by several speakers, and a committee of nine soon indicated a desire to visit Highland, attend the Grange and look at the proposed location. Your correspondent and his better half will be among the number, and on his return will possibly have more to say on this important subject.

It is proper to say that for two years prior to the first meeting of this month the writer held the position of newspaper correspondent of San Jose Grange. At that time his resignation was tendered and accepted and Mrs. N. A. Saunders was appointed to that position.

AMOS ADAMS.

San Jose, April 13, 1895.

### Tulare Grange.

A special meeting of Tulare Grange was held on Thursday, the 11th inst., to receive the Worthy Overseer of the State Grange and other business. Two members were received by affiliation.

The Worthy Overseer, W. W. Greer, had arrived in Tulare on the evening train of the 7th; and during the interval between his arrival and time of meeting, in company with some of the brethren of Tulare Grange, had travelled over the country adjacent to Tulare interviewing members and former members of the Order.

At the meeting, the hall being decorated for the occasion by the sisters of the Grange, Bro. Greer spoke for fully an hour, during which he instructed in the secret work in the first and fourth degrees. Bro. Greer has his work well and does it well. During his address he told us of his other meetings as Grange Inspector, of interest taken in the Order in other localities and of possibilities for the Order in Tulare, advising all the members to have faith and persevere in their good work, and recommending the Order to all engaged or interested in farming, the Patrons of Husbandry being strictly and essentially a farmers' organization, organized by farmers and for farmers, their wives and children.

The Patrons of Husbandry is a moral, social, fraternal and educational order. It inculcates and teaches all the moral virtues, such as temperance, justice, industry, frugality and charity in its broadest meaning. It teaches us to be considerate of each other, and, before and above any other moral order, it enjoins on us kindness and consideration for our domestic animals—those poor dumb servants of ours, whose labors and services aid us so much in our work, our enjoyment and our prosperity in life. The Patron who practices this virtue will always be a kind parent, a good friend, a typical good citizen. It is a grand, distinguishing feature of our Order in the practice of which we should never fail. As a social Order, it is the extension of the family; parents and children all alike assemble under its roof, enjoy its teachings and festivals and practice its precepts and virtues. As the Order has in view only the fraternal, social and moral interests of all engaged in the business of husbandry, so all engaged in or having the welfare of husbandry at heart should assist in maintaining and promoting the Order. The good of the husbandman, of the husbandman's family, of society, requires it. Let the farmer then consider it from this point of view. No one has rights but duties appertain thereto. If good comes from the Order, it is the duty of all of us to aid in securing that good. Without that general and common assistance, the fullest measure of good cannot be had. It is then our duty, both as individuals and citizens, to aid and assist in promoting the general good, which is also our individual good. Those, therefore,

(Concluded on next page.)

Last year we commenced an elaborate plan of advertising, but before we were half through, OUR ADVERTISEMENTS DISAPPEARED. Why? Because WE WERE OVERWHELMED WITH BUSINESS. There was but one thing to do: withdraw the advertising and devote every energy to filling the orders with which we were flooded. This we did, and handled with reasonable promptness a most unprecedented year's business. WITH ENLARGED FACTORIES, INCREASED FACILITIES, AND TWENTY BRANCH HOUSES FROM WHICH TO DISPATCH OUR GOODS, WE CAN NOW CARE FOR ALL WHO COME. Last year we could not reduce prices, because we were compelled in some way to limit the demand for Aermotor goods. We would have been satisfied with lower prices, but why create a demand which we could not supply? We have made the heaviest purchases of steel and material hitherto in America this year, and at unprecedented prices, and have made terms to dealers which enable them to make unprecedented prices.

In quality, character, variety, finish, and accessibility to full stock of goods and repairs, we are without competitors. In our plan of advertising last year, we proposed to furnish a feed cutter under certain conditions for \$15. For reasons stated above we did not complete the advertising, and the feed cutter was not put out. We now propose to make amends in the following manner: We will announce in this paper our NEW ALL-STEEL VERY SUPERIOR FEED CUTTER, WORTH

**\$40 at \$10**

cash with order, f. o. b. Chicago. Only one to one person, he to furnish addresses of ten neighbors who ought to have something in our line. Cut, description and full information regarding it will appear soon.

We especially desire to caution you against paying excessive prices for windmill outfits. The temptation on the part of the dealer to overcharge is great. \$10 added to price is \$10 clear dealer. To be sure proper price and artifice are, and always have been, but the legitimate price is \$10. We are enabled to have special tools for each piece, and on it to merely picking up down again. So small has become the cost of labor put out that it is not worth the material in the country being made up in the form of plain windmills, towers, pumps, etc. To such an extent has this become true, that FOUR LARGE WINDMILL CONCERNS ARE BUYING THEIR TOWERS OF US THIS YEAR. THEY DO IT BECAUSE WE MAKE THE ONLY ABSOLUTELY RELIABLE AND SAFE TOWER; BECAUSE THEY CAN BUY OF US CHEAPER THAN THEY CAN BUILD; BECAUSE WE ALONE ARE PREPARED TO GALVANIZE EVERYTHING AFTER IT IS COMPLETED, AND COMPLETE EVERYTHING EXACTLY RIGHT.

These concerns are wise, for even though they may not furnish the best of wheels, the wheel will have the best of supports. Send to us your name and address, and those of your neighbors who may need something in our line, and thereby do them a good turn. The Aermotor Co. is one of the most successful business enterprises which has been launched in recent times. In succeeding advertisements will be discussed and made clear the lines on which that success has been worked out. It was done by a farmer's boy. A careful following of these advertisements may suggest to some other farmer's boy a career.

Aermotor Co., 12th, Rockwell & Fillmore Sts., Chicago.



### A STANDARD OF EXCELLENCE

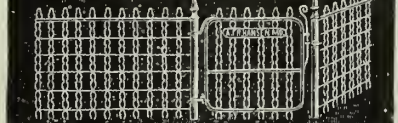
Should be adopted for "fence viewers," judges at fairs, etc. At present, "just as good as the Page" is the universal claim. As a suggestion we offer the following scale of points for farm use:

|                           |     |
|---------------------------|-----|
| Strength                  | 20  |
| Height                    | 20  |
| Closeness of mesh         | 20  |
| Attractive Appearance     | 10  |
| Elasticity and Durability | 30  |
|                           | 100 |

If the last two are separated, Elasticity should have 25, as Durability is almost wholly dependent on it.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

### "HARTMAN" STEEL PICKET LAWN FENCE



STRONGER THAN IRON. CHEAPER THAN WOOD. HANDSOMER THAN EITHER. PROTECTS A lawn without CONCEALING it. Posts driven deep and ANCHORED. Get Prices for your Garden, or Church, or—? HARTMAN MFG. CO., 277 BROADWAY, NEW YORK. 601-2 MANHATTAN BLDG., CHICAGO. Factories: ELLWOOD CITY, Penna. For Beautiful Calendar, send 4 cts. in stamps.

In answering advertisements mention this paper.

### WOVEN WIRE FENCE

Horse high, bull strong pig and chicken tight. 13 to 20 cents a Rod. 50 styles. A man and boy can make 40 to 60 rods a day, catalog free. KITSelman Bros., Ridgeville, Ind.

### EMULSION SPRAYER



For fruit trees, vines, garden flowers. Our book on Sprayers tells how to help you, your crops and our business to pay. Its Free send for it. W & B. DOUGLAS, Middletown, Ct. New York. Chicago.

## THE OWEN ELECTRIC BELT



Trade Mark—Dr. A. Owen

### FOR MEN AND WOMEN

The latest and only scientific and practical Electric Belt made, for general use, producing a genuine current of Electricity, for the cure of disease, that can be readily felt and regulated both in quantity and power, and applied to any part of the body. It can be worn at any time during working hours or sleep, and

### WILL POSITIVELY CURE

RHEUMATISM LUMBAGO GENERAL DEBILITY LAME BACK NERVOUS DISEASES CHRONIC DISEASES AND FUNCTIONAL DERANGEMENTS

### WITHOUT MEDICINE

Electricity, properly applied, is fast taking the place of drugs for all Nervous, Rheumatic, Kidney and Urinary Troubles, and will effect cures in seemingly hopeless cases where every other known means has failed.

Any sluggish, weak or diseased organ may by this means be roused to healthy activity before it is too late.

Leading medical men use and recommend the Owen Belt in their practice.

### OUR LARGE ILLUSTRATED CATALOGUE

Contains fullest information regarding the cure of acute, chronic and nervous diseases, prices, and how to order, in English, German, Swedish and Norwegian languages, will be mailed, upon application, to any address for 6 cents postage.

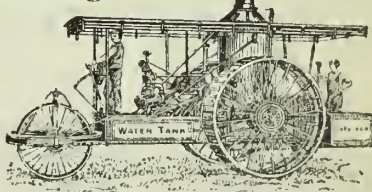
### The Owen Electric Belt and Appliance Co.

MAIN OFFICE AND ONLY FACTORY, The Owen Electric Belt Bldg., 201 to 211 State Street, CHICAGO, ILL.

'he Largest Electric Belt Establishment in the World

MENTION THIS PAPER.

### Price's Traction Engine.



We have one of these engines that was used about one month last season and was taken back by us by reason of illness of purchaser. Engine is in perfect order, and in better working order than when first sent from the factory. A BARGAIN. Indicated power, 80-horse; Cylinders, 8x8; Wheels, 8 ft. high, 28 in. wide; weight, less than 10 tons. Price when new, \$4500.

### HOOKE & CO.,

16 and 18 Drumm Street, San Francisco.



Makes a clean sweep of Two Acres at a sitting. A man, a boy and a horse can operate it. No Heavy Chains or rods to handle. The crop on a few acres the first year will pay for the Machine. Send postal card for Illustrated Catalogue, giving price, terms, testimonials, also full information concerning our Iron Giant Grub and Stump Machine, Two Horse Hawkeye and other appliances for clearing timber land. Address: MILNE MANUFACTURING CO., 641 8th St., Mammoth, Ill. Sunnyside Shelland Pony Farm. For catalogue address Milne Bros. at above office and number. Breeders of Pure Shelland Ponies.

### TREE - WASH.

Olive Dip. "Greenbank" Powdered Caustic Soda and Pure Potash.

T. W. JACKSON & CO. Sole Agents. - No. 226 Market Street SAN FRANCISCO, CAL.

### SPRAY PUMPS

Express Paid Satisfaction Guaranteed or Money Refunded. Endorsed by Leading Entomologists. 60,000 in use. We are U. S. Headquarters for Spray Pumps, and Insecticides. Catalogue, Spray Calendar, and full Treatise on Spraying, FREE.

\$17. SPRAYING OUTFIT \$5.50 EXPRESS PAID, FOR P. C. LEWIS MFG. CO., Box 135 Catskill, N. Y.



Our Pumps Have Automatic Agitators and No Best Work. Everybody says so. Catalogue and book of instruction free. FIELD FORCE PUMP CO., 881 Bristol Ave., Lockport, N. Y.

If It's a Sprain, Strain, or Bruise

## St. Jacobs Oil

Will Cure It



## Tulare Grange.

(Continued from page 251.)

who participate in the general good, and do not by their individual assistance contribute to the general good, are receiving that for which they give no remuneration, which should not be.

Besides its social, moral and fraternal features, as a training school for the proper consideration of all subjects pertaining to good citizenship and for the proper formulation of our ideas on those subjects and the proper expression of them under parliamentary rules, the Grange has no superior.

It was resolved hereafter to have occasional open meetings, to which non-members will be invited, and subjects of interest to the community will be considered.

The Secretary was directed to send for regalia necessary to the proper conferring of the degrees.

For a couple of hours the members present and the Worthy Overseer, in a discursive way, considered the interests of the Order and of Tulare Grange in particular.

Every member present left feeling that he or she had a pleasant and profitable time, the Worthy Overseer himself promising to return in the near future and inspect Tulare Grange, there now being applications in for the degrees and candidates waiting.

Tulare, April 15, 1895. J. T.

## Questions Answered.

TEMESCAL, CAL., April 15th, 1895.

Dear Brother Holman: Will you do me the favor to answer the following questions: Did you, in conference with the Executive Committee in the matter of the Grange organ, presume to dictate who should be the editor of the Grange Department, and what his compensation should be; also, did you presume to dictate who should be chosen Master and Secretary of the State Grange?

Please give your answer through the RURAL PRESS, as many besides myself will be interested in it. Fraternally yours,

IRENE V. WOODHAMS.

A direct and truthful answer to these questions would be the single word "NO"; but it may interest Sister Woodhams and others to hear not only the truth but the truth with circumstances.

As to question number one:—When I proposed that a Grange editor be employed, Brother George Ohleyer was in my mind as a person eminently suited for the work, and I think I mentioned his name. I also mentioned Bro. Goodenough as another well qualified person; also, if I remember correctly, I named Sister Ashley as competent for the work. Various other names were brought forward by others during the conference. Secretary Mills, I think, proposed Past Master Davis; Mr. Walton suggested Mr. Edward F. Adams, remarking, however, that Mr. Adams' time was so taken up with other work that he doubted if he could be induced to accept. These and other names were mentioned—all purely in the way of suggestion. I certainly did not presume to dictate in the matter or to do anything more than I have outlined above.

As to question number two:—There was some talk in the Committee about what the compensation should be, but, as I remember it, no sum was named. I certainly did not presume to dictate, and did not even offer a suggestion in the matter.

As to question number three:—I have never at any time in any way even offered a suggestion as to who should be elected Master. At Petaluma I should personally have been pleased with the election of Sister Hattie Jones, who was one of the candidates, and said as much. Whatever may have been wrong in that preference I am quite willing to confess.

I have, however, at various times and places, given my notion of the kind of persons who should be chosen to the leading offices. I have declared that for Master the Grange needs a man having in him the capacity for public leadership. I have also declared that for Secretary the Grange needs a person who is something more than a mere clerk. I have declared that in my

judgment the very life of the Grange in California depends upon the selection of such qualified persons at the next election.

In all that I have done or said or not done or said, as outlined above, I trust there is nothing out of keeping with the character of a true Patron of Husbandry. Fraternally,

ALFRED HOLMAN.

## Completely Paralyzed.

PHYSICIANS ARE ASTOUNDED BY A PECULIAR CASE.

A Young Man Stricken with Landry's Paralysis and Yet He Recovers—How His Cure Was Accomplished.

(From the Times, Philadelphia, Pa.)

Stricken with Landry's Paralysis and yet cured. That means but little to the average layman, but it means a miracle to a physician. Such is the experience of O. E. Dallimore, now a resident of Madison, N. J., and a rare experience it is.

"Yes, it's true that I had Landry's Paralysis," said Mr. Dallimore to a reporter, "or else the most celebrated physicians of London were mistaken. That I have been cured is clearly apparent," and with this he straightened up as sturdy and promising a son of Britain as ever trod American soil.

"It was on the 15th of March, this year," he continued, "when I was in New York city, that I first felt the symptoms of my trouble. I experienced difficulty in going up stairs, my legs failing to support me. I consulted my physician who informed me that I had every symptom of locomotor ataxia, but as the case developed he pronounced it a case of Landry's Paralysis and knowing the nature of the disease advised me to start for my home and friends. I gave up my work and on April 1st started for London, Ont. A well-known physician was consulted, but I grew rapidly worse and on Saturday, April 7th, several eminent physicians held a consultation on my case and informed me that I was at death's door, having but three to six days to live; still I lingered on, by this time completely paralyzed, my hands and feet being dead, I could hardly whisper my wants and could only swallow liquids. Oh! the misery of those moments are beyond all description and death would really have been a welcome visitor.

"Now comes the part that has astounded the physicians. Rev. Dr. Gandy, a clergyman who visited me in my last hours, as he supposed, told me of the marvelous cures of paralysis that had been performed by Dr. Williams' Pink Pills for Pale People. I started to take the pills about April 25th, and a week after that felt an improvement in my condition. There was a warm, tingling sensation in the limbs that had been entirely dead and I soon began to move my feet and hands; the improvement continued until May 25th, when I was taken out of bed for a drive and drove the horse myself. By the beginning of July I was able to walk upstairs alone and I paid a visit to Niagara.

"Slowly but surely I gained my old health and strength, leaving Ontario for New York on October 11th and beginning my work again on October 20, 1894. Cured of Landry's Paralysis in eight months."

To confirm his story beyond all doubt, Mr. Dallimore made the following affidavit:

STATE OF NEW JERSEY, ss.

MORRIS COUNTY. Olive Dallimore being duly sworn on his oath saith that the foregoing statement is just and true. OLIVE E. DALLIMORE.

Sworn and subscribed before me December 3, 1894. AMOS C. RATHBUN, Notary Public.

Dr. Williams' Pink Pills for Pale People have an enormous sale, and from all quarters come in glowing reports of the excellent results following their use. An analysis proves that they contain in a condensed form all the elements necessary to give new life and richness to the blood and to restore shattered nerves. They are an unfailing specific for such diseases as locomotor ataxia, partial paralysis, St. Vitus' dance, sciatica, neuralgia, rheumatism, nervous headache, the after effects of la grippe, palpitation of the heart, pale and sallow complexions, that tired feeling resulting from nervous prostration; all diseases resulting from vitiated humors in the blood, such as scrofula, chronic erysipelas, etc. They are also a specific for troubles peculiar to females, such as suppressions, irregularities and all forms of weakness. They build up the blood, and restore the glow of health to pale and sallow cheeks. In men they effect a radical cure in all cases arising from mental worry, overwork or excesses of whatever nature. There are no ill effects following the use of this wonderful medicine, and it can be given to children with perfect safety.

These Pills are manufactured by the Dr. Williams' Medicine Company, Schenectady, N. Y., and are sold only in boxes bearing the firm's trade mark and wrapper, at 50 cents a box or six boxes for \$2.50, and are never sold in bulk. They may be had of all druggists or direct by mail from Dr. Williams' Medicine Company. The price at which these pills are sold makes a course of treatment inexpensive as compared with other remedies.

## Complete Fertilizers

for potatoes, fruits, and all vegetables require (to secure the largest yield and best quality)

## At Least 10% Actual Potash.

Results of experiments prove this conclusively. How and why, is told in our pamphlets.

They are sent free. It will cost you nothing to read them, and they will save you dollars.

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## WAUKEGAN BARBED WIRE.

Weight per Rod,  
Not Price per Pound,  
Makes the Cheap Fence.

100 Rods of Waukegan  
Weigh only 90 Pounds.

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SOLE MANUFACTURERS.

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IRON, CUT, PUNCHED AND FORMED, AND TOOLS SUPPLIED FOR MAKING PIPE ON THE GROUND WHERE REQUIRED.

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OUTHOUSES, SHEDS AND DWELLINGS WITH  
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FOR FENCE POSTS, WATER TANKS, ROOFS, WOOD OR IRON,  
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FOR POULTRY HOUSES, CREAMERIES, FLOORS AND WALLS,  
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Highest Awards at Chicago, 1893, San Francisco, 1894.

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LOS ANGELES. SAN FRANCISCO. PORTLAND, OR.

## Protect Your Trees

—WITH—

Gilman's Patent Tule Tree Protector.

PATENTED AUGUST 1, 1893.

FIRST PRIZE—Medal and Diploma—California Mid-Winter International Exposition.  
Cheapest, best and only one to protect trees and vines from frost, sunburn, rabbits, squirrels, borers and other tree pests.  
For testimonials from parties who are using them, send for descriptive circulars.

B. F. GILMAN,

Sole Manufacturer of Patent Tule Covers,  
420 Ninth Street, San Francisco, Cal.





S. F. MARKET REPORT.

Market Review.

SAN FRANCISCO, April 17, 1895.

**WHEAT**—There is good tone to the market, with the situation tending rather favorably for sellers. While the demand is not of urgent character, there are buyers ready to take all offerings that are of desirable character for export purposes, and the market therefore keeps in steady motion. No. 1 shipping is quotable at 86½¢ ctl, with 87½¢ for a choice article. Milling grades show steadiness at a range of 90¢ to 95¢ ctl.

**BARLEY**—Prices have taken a downward turn, presumably on account of bright crop prospects. Feed qualities are offering freely, but buyers hang back and trade is limited in volume. Brewing descriptions are hard to place. Dealers canvass among malsters every day, but make little headway in the shape of sales. As a consequence, the outlook is not encouraging for holders. We quote: Feed, fair to good, 55¢ to 67½¢; choice, 68½¢ to 70¢; Brewing, 80¢ to 87½¢ ctl.

**OATS**—The situation has not materially altered in a week. Trade is fair, but not large enough to cause any perceptible decrease in stocks. There is rather steady holding, and values are moderately well sustained. We quote: Milling, \$1 07½¢ to 1 17½¢; Surprise, \$1 07½¢ to 1 17½¢; fancy feed, \$1 02½¢ to 1 07½¢; good to choice, 95¢ to \$1; fair to good, 90¢ to 95¢; poor to fair, 85¢ to 87½¢; Black, nominal; Gray, 95¢ to \$1 02½¢ ctl.

**CORN**—Is not active. Damp stock sells below quoted figures. We quote: Large Yellow, \$1 10¢ to 1 17½¢; small Yellow, \$1 12½¢ to 1 20¢; White, \$1 10¢ to 1 17½¢ ctl.

**RYE**—Quotable at 85¢ to 86½¢ ctl.

**BUCKWHEAT**—Quotable at 80¢ to 85¢ ctl.

**HAY**—Prices were lowered this week and the tendency is still downward. Buyers take barely enough to meet immediate wants, having little confidence in the future of the market. We quote: Wheat, \$8 to 11; Wheat and Oat, \$8 to 11; Oat, \$8 to 10 50; Alfalfa, \$5 50 to \$5 50; Barley, \$7 to \$8 50; Clover, \$7 to \$8; Compressed, \$8 to 10 50; Stock, \$6 to 7 ton.

**STRAW**—Quotable at 50¢ to 70¢ bale.

**FEED**—Manhattan Horse Food (Red Ball Brand) in 100-lb cabinets, \$8; Manhattan Egg Food, 100-lb bags, \$11 50.

**BEANS**—Bayos are lower and quotations for Pinks have been shaded. Whites are held with steadiness, though trade is somewhat slow. We quote: Bayos, \$1 50 to 1 80; Butter, \$2 to 2 25 for small and \$2 25 to 2 50 for large; Pink, \$1 50 to 1 75; Red, \$1 60 to 1 75; Lima, \$1 50 to 1 70; Pea, \$2 75 to 2 90; Small White, \$2 75 to 2 90; Large White, \$2 50 to \$2 70; Blackeye, \$3 to 3 50; Red Kidney, \$2 75 to 3; Horse, \$1 60 to 1 70 ctl.

**POTATOES**—Prices for new crop are easing, and it must be something fancy to bring the top quotation. Old stock is in good supply. We quote as follows: New, 1¢ to 1½¢ lb; Early Rose, 35¢ to 40¢; River Reds, 30¢ to 35¢; Burbanks, 45¢ to 50¢; Oregon Burbanks, 40¢ to 50¢ ctl.

**ONIONS**—Are steady. Good to choice California, 60¢ to 90¢ ctl; cut, 25¢ to 50¢; Oregon, 90¢ to \$1 25 ctl.

**VARIOUS**—We quote: Cucumbers, 50¢ to 75¢ doz; Asparagus, 75¢ to \$1 50 box for the general run and \$1 75 to 2 for fancy; Rhubarb, 25¢ to 60¢ box; String Beans, 10¢ to 12¢ lb; Green Peas, 24¢ to 40¢ lb for good to choice; Turnips, 50¢ ctl; Beets, 60¢ to 75¢ sack; Carrots, 30¢ to 50¢; Cabbage, 75¢ to 85¢ ctl; Garlic, 3½¢ to 4½¢ lb; Cauliflower, 75¢ to 90¢ doz; Dried Peppers, 11¢ to 12¢ lb; Dried Okra, 15¢ lb.

**FRESH FRUIT**—Choice Apples are very scarce. We quote: Apples, 50¢ to \$1 75 for common to choice, with \$2 to 2 50 for fancy.

**STRAWBERRIES**—Receipts yesterday were 60 chests, some being very fine and some quite poor in quality. We quote: Sharpless, 56¢ to 10; Longworth, \$10 to 13 per chest.

**CITRUS FRUIT**—Oranges are in liberal offering, with prices easy. We quote as follows: California Navels, \$1 25 to 2 50; Seedlings, 75¢ to \$1 25 box; Mexican Limes, \$3 50 to 4 box; Lemons, Sicily, \$3 to 4; California Lemons, \$1 to 1 50 for common and \$2 to 2 50 for good to choice.

**DRIED FRUIT**—Choice goods are not plentiful, but the demand is not brisk and prices for such stock are but moderately firm. Promises for a large prune crop are said to be favorable.

Following are the prices furnished by the Fruit Exchange. The figures presented represent carload lots, smaller parcels occasionally selling at slightly lower rates:

Apricots—Fancy Moorpark, 8¢; choice, do, 7½¢; fancy, 7¢; choice, 6¢; standard, 5½¢; prime, 5¢. Apples—Evaporated, 4½¢ to 6¢; sun-dried, 4 to 5¢. Peaches—Fancy, 7¢; choice, 6½¢; standard, 5½¢; prime, 5¢; peeled, in boxes, 12 to 13¢. Pears—Fancy, halves, 5½¢; quarters, 4½¢; choice, 4½¢; standard, 3½¢; prime, 3¢. Plums—Pitted, 4 to 5¢; unpitted, 1½ to 2¢. Prunes—Four sizes, 4½ to 4¾¢. Nectarines—Fancy, 7¢; choice, 6½¢; standard, 6¢; prime, 5½¢. Figs—White, choice, 4 to 5¢; black, choice, 2½ to 3¢. Dried Grapes—1½ to 1¾¢ lb. Raisins—In sacks (50-lb boxes selling at 1½ to 1 lb higher): 4-crown, loose, 4¢; 3-crown, 2½¢; 2-crown, 2¢; seedless Sultanias, 3¢; seedless Mus-

cats, 20¢ lb; 3-crown London Layers, \$1 40 box in 20-lb boxes; clusters, \$2; Dehesa clusters, \$2 50; Imperial clusters, \$3; 4-crown, loose, \$1; 4-crown, loose, faced, \$1 15 box.

**NUTS**—The Almond crop this season is expected to be light, on account of frost. Walnuts of first-class quality are scarce, though there are liberal offerings of ordinary grades. We quote: Chestnuts, 6 to 7¢; Walnuts, 6 to 7¢ for hard shell, 7 to 9½¢ for soft shell and 7 to 9½¢ for paper shell; California Almonds, 5 to 6¢ for soft shell, 2 to 2½¢ for hard shell and — for paper shell; Peanuts, 4 to 6¢; Hickory Nuts, 5 to 6¢; Filberts, 8 to 9¢; Pecans, 6¢ for rough and 8¢ for polished; Brazil Nuts, 7 to 7½¢ lb; Cocoanuts, \$1 50 to 50¢ lb.

**HONEY**—Prices are easy, buyers holding off. The outlook for the new crop is said to be good. We quote: Comb, 9 to 11¢; water white, extracted, 6½ to 7¢; light amber, extracted, 5½ to 6¢; dark amber, 5 to 5½¢ lb.

**BEESWAX**—Offerings are light, quotable at 26 to 28¢ lb.

**BUTTER**—Low prices help to stimulate the demand, but supplies are too heavy to be conveniently handled and the situation still shapes against producers.

Creamery—Fancy, 13 to 13½¢; seconds, 11½ to 12½¢ lb.

Dairy—Fancy, 10½ to 11¢; fair to choice, 8 to 10¢; store lots, 6 to 7¢.

**CHEESE**—We quote: Choice to fancy, 7 to 8¢; fair to good, 4½ to 6¢; Eastern, ordinary to fine, 10 to 14¢ lb.

**EGGS**—The tendency of the market is downward. Quotable at 10½ to 12¢ per dozen for store and 12½ to 13½¢ for ranch.

**POULTRY**—As a rule, the market is slow and weak. Occasionally a crop of choice young stock will sell at an advance on quoted figures. We quote: Live Turkeys—Gobblers, 12 to 13¢ lb; Roosters, 11¢ lb; dressed Turkeys, 12 to 13¢ lb; Broilers, \$4 to 4 50 for old, and \$5 50 to 7 50 for young; Fryers, \$2 50 to 3 50 for small and \$4 50 to 5 50 for large; Ducks, \$5 to 6¢; Hens, \$4 to 4 50; Geese, \$1 50 to 2 pair; Pigeons, \$1 50 to 2 25 dozen.

**WOOL**—Movement is becoming somewhat more active. Prices are a shade stronger on choice Wools, but there is no improvement in poor fleeces.

The weekly report of Thos. Denigan, Son & Co. says: "The market rules quiet in San Francisco, though we hear that a country business is being done at high figures, where speculators can get choice Calaveras and foothill Wools, of which there seems to be a scarcity. The very choice parcels of these Wools are always in demand, as the shrinkage is light and the color and conditions otherwise make them attractive and valuable to dealers and manufacturers. On the other hand, low-grade Wools are not going off freely, and, as heretofore, such stock will have to find buyers among scourers, who take them only when they can find outlets in advance."

We quote spring: Year's fleece, San Joaquin, 4 to 6½¢ 6 to 8 months do 4 to 8 6 to 8 months Calaveras and foothill, free 7 to 9 Do, defective 4 to 6

We quote fall: Mountain, free 4½ to 6¢ Plains, defective 3 to 4½

We quote Nevada spring: Light and choice 8½ to 10 Heavy 6 to 7

We quote Oregon spring: Eastern, choice 8 to 10 Do, poor 6 to 7 Valley, choice 9 to 11 Do, low grade 8 to 10

**HOPS**—Market lifeless both here and at distant centers. Quotable at 5 to 7½¢ lb.

FERTILIZERS!

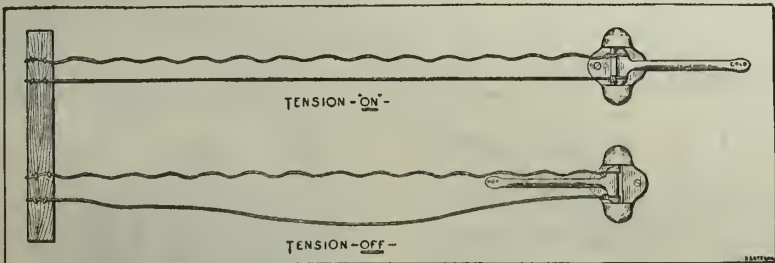
WESTERN FERTILIZER & CHEMICAL WORKS, Successors to Mex. Phosphate and Sulph. Co. and H. M. Newhall & Co. REDUCED PRICES. SEND FOR CIRCULAR. 309 Sansome Street, San Francisco.

**FRUIT EVAPORATOR** THE ZIMMERMAN THE Standard Machine Different sizes and prices. Illustrated Catalogue free. THE BLYMYER IRON WORKS CO., Cincinnati, O.

**WAGON AND PLATFORM SCALES** HOOKER & CO. 12-18 DRUMM STREET, S. F.

**LEE D. CRAIG,** Notary Public and Commissioner of Deeds, 316 MONTGOMERY STREET, Bet. California and Pine. SAN FRANCISCO, CAL.

**IF YOU WANT** A SMALL FARM ON MOST favorable terms, address S. C. TRAYNER, Marysville.....California.



A New Talking Machine.

It differs from the Phonograph in this: The latter only repeats what is said to it, while this machine takes both sides of the argument and will convince the inquirer in a moment that there is but one safe way to build wire fence, namely, to recognize and provide for contraction and expansion, and one interview will generally satisfy him that the continuous coiled steel spring is the only practical method yet discovered. The cut was made from a photograph of two machines; the upper one shows the coiled wire and the straight wire stretched exactly alike, as they would appear in a new fence; in the other, the lever is thrown back loosening both wires, precisely the same, and it shows how little the Coiled Spring is affected, while the

straight wire is rendered entirely useless for fence purposes. While in practice these changes will not occur so suddenly, they are none the less certain whenever there are changes in temperature, or animals crowd or run into the fence.

The mission of this little instrument is simply to introduce the subject and call the attention of those who need fence to the Page Woven Wire, which is built on this identical plan, and is the only elastic fence offered. The real fence also has the knack of "speaking for itself," delivering lectures on "The Advantages of Self-Government," "Attention to Business," "Keeping Everlastingly at it," etc.

Write the Page Woven Wire Fence Co., Adrian, Mich., and learn all about it.

The Importance of Close Skimming.

Did you ever figure out the value of one-tenth of one per cent. of fat in the average creamery? The average creamery gets about ten thousand pounds of milk per day, and a waste of one-tenth of a per cent. with butter at twenty cents per pound means eight hundred and seventy-six dollars per year, and that is a good living for any family. Time is money and time wasted fixing an engine or separator that is out of order is money thrown away. An hour a day spent in washing up a separator when it can be done in ten minutes, is the kind of wilful waste that brings woeful want. The designer and manufacturer of the RUSSIAN CREAM SEPARATOR has had in view the saving of all these wastes. The way to find out whether he has succeeded is to visit a creamery where a RUSSIAN CREAM SEPARATOR is running and see what the operator says. Send for our handsome illustrated catalogue to P. M. SHARPLES, West Chester, Pa., Elgin, Ill., or Rutland, Vt.

Baker & Hamilton,

Sole Pacific Coast Agents,

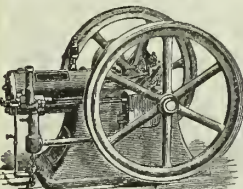
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List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING APRIL 2, 1895.

- 536,982.—TREE PROTECTOR—C. W. Anderson, Los Angeles, Cal.
- 536,983.—FLOATING DOCK—J. J. Cousins, S. F.
- 536,610.—DOOR CASING—E. G. Durant, Pasadena, Cal.
- 536,721.—REFRIGERATOR CAR—J. M. Gilstrap, Sacramento, Cal.
- 536,927.—FIRE ESCAPE—J. L. Gregory, Washoe, Nev.
- 536,874.—EXHAUST NOZZLE—E. W. Harris, Palisade, Nev.
- 536,876.—STUMP PULLER—E. W. Jones, Portland, Ogn.
- 536,754.—SOCKET WRENCH—E. E. Masten, Sacramento, Cal.
- 536,756.—DREDGER—C. Meier, S. F.
- 536,757.—LAMP STOVE—W. R. Myers, S. F.
- 536,893.—AMALGAMATOR—N. L. Raber, Corvallis, Ogn.
- 536,704.—CAR SAFETY GUARD—G. Rischmuller, S. F.
- 536,842.—WATER MOTOR—R. C. Shepherd, Redlands, Cal.
- 536,767.—UMBRELLA AND FAN—M. Stooklmeier, Los Gatos, Cal.
- 536,822.—SAW HANDLE—John Tors, Fort Bragg, Cal.
- 536,769.—FLUSHING DRAIN PIPES OF SINKS, ETC.—F. B. Vinter, San Jose, Cal.
- 536,770.—FLUSHING DRAIN PIPES OF SINKS, ETC.—F. B. Vinter, San Jose, Cal.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast Inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

California Inventors

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General Commission Merchants, 310 CALIFORNIA ST., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

WANTED!

Position as Manager on a Large Farm. Thorough acquaintance with Stock Raising, Dairy Business, General Farming. Experience in foreign countries: French, English, German correspondence; Bookkeeping; Graduate of Agricultural Academy in Germany. P. O. box 1855. Bakersfield, Kern County, Cal.

**STUMP PULLERS** HOOKER & CO. 16 & 18 DRUMM ST. S. F.



## To Clean Machinery.

A method of removing sticky deposits of grease and dirt from parts of machinery by means of soda lye is quite extensively employed in England. To 1000 parts by weight of water are taken about 10 or 15 parts caustic soda and 100 parts ordinary soda. This mixture is boiled and the parts of the machinery to be cleaned are placed in it, when all grease, oil and dirt are quickly loosened. It is then necessary to wash the metal and dry it well. The action of the lye is to form with the grease soaps soluble in water. To prevent the lubricating oil, etc., hardening upon the parts of the machinery when in use, it is necessary to add a third part of kerosene, and it is well, also, to oil with kerosene from time to time.

The failure of the Canadian Pacific railway to pay dividends on its common stock is not a surprise to those who have known that the Canadian Government has for years loaned to this company the money for dividends. All this time the debt of Canada has been growing, but it was supposed that the mortgage on the property and bonds of the railroad would prove a good security. For a while, in years of its prosperity, it is probable that the dividend was earned. Money was also raised by the issue of new stock, ostensibly to pay for new lines and equipments. Part of this money went to pay dividends. The last three years the earnings of the company steadily declined. In 1892 they were \$21,400,000. In 1893 they were only \$20,962,000, and last year there was a drop to \$18,700,000. From 1884 to 1893 the capitalization of the company increased from \$100,000,000 to \$177,000,000. The dividends on the stock were guaranteed by the Dominion Government from 1883 to 1893, and with the expiration of the guarantee the dividends ceased. The railroad has been the chief backer of the MacDonald and the Thompson administrations. If the Liberals come into power, as they are likely to do, the road will not further involve the people of Canada in debt. The Canadian debt in 1870 was \$173,000,000, but in 1890 it was \$286,000,000, and on June 30, 1893, it had increased to \$300,000,000. This is about \$60 per head for man, woman and child. The debt is increasing, while emigration to the United States makes the Canadian increase in population very slow. At least 1,000,000 natives of Canada are now living in the United States.

W. P. Fuller & Co. have finally quit fighting the Standard Oil combine, and coal oil, gasoline, etc., have advanced one cent a gallon. The coast consumes about 20,000,000 gallons annually.

FOR ALLAYING HOARSENESS AND IRRITATION OF THE THROAT. Use "Brown's Bronchial Troches." 25c a box. Avoid imitations.

A Southern Pacific trust deed recorded at Bakersfield transfers all of the company's property, including rolling stock, to the Central Trust Company of New York for \$58,000,000.

## A Worthy Firm.

Ingenuity, coupled with enterprise, has made the firm of Jas. Milne & Son, patentees and manufacturers of grub and stump machines, now at Monmouth, Ill., the largest establishment of the kind in the world.

They have made it possible for farmers to clear their land rapidly and with trivial expense.

Messrs. Milne & Son have just removed from Scotch Grove, Iowa, into an enlarged plant at Monmouth, Ill., where they are able to promptly fill the rapidly increasing number of orders.

Milne Bros., have also removed their immense Shetland Pony business, which includes a large number of the finest of these little animals, to the latter city.

We recommend that our readers write Messrs. Milne & Son for their interesting catalogue which fully describes their grub and stump machines.\*

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HIDES, HAY, HOPS, WOOL  
WRITE FOR PRICES  
**I. J. TRUMAN & CO.**  
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Is experience worth anything in farming? Suppose you decide to move to town and rent the farm "on shares."

You have a chance to rent to a man who has been a storekeeper; to another who has been a stock buyer; to one who has been farming for five years, and to another who has been farming for twenty years. Other things being equal the "twenty year" man would get your farm. Greater experience—that's the reason.

**McGORMICK**

is the name of the inventor of the first successful reaping machine.

Since 1831 that name has been identified with whatever is best in grain and grass harvesters.

The makers of the McCormick have neither been "keeping store" nor "buying cattle"—perfectly honorable lines of business, but for the McCormick line. For sixty-four years they've simply been building McCormick light-running steel binders, reapers and mowers. That's greater experience than anybody else has had in this line.

That's one of the reasons why McCormick machines lead the world.

There are others; apply to the nearest McCormick agency for particulars.

**WHAT WE SAY WE DO WE DO DO**

**At 1/4 Price**

Gold and Silver Watches, Bicycles, Tricycles, Guns and Pistols, Carriages, Buggies, Wagons, Larders, Safes, Sleighs, Harness, Cart Lamps, Bells, Sewing Machines, Accordions, Organs, Pianos, Elder Mills, Cash Registers, Fred Mills, Saws, Knives, Bone Mills, Letter Presses, Jack Screws, Trucks, Anvils, Haycutters, Press Mangles, Copy Books, Vices, Drills, Road Plows, Lawn Mowers, Coffee Mills, Lathes, Sanders, Dump Carts, Corn Shellers, Hand Carls, Forges, Scrapers, Wire Fences, Fanning Mills, Wringers, Engines, Saws, Steel Sinks, Grain Dumps, Crow Bars, Rollers, Trucks, Bit Braces, Hay, Stock, Elevator, Rail Road, Platform and Trolley SCALES.

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FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils.

A Department of Electrical Engineering Has been established under a thoroughly qualified instructor. The course is thoroughly practical. Send for Circular. C. S. HALEY, Sec.

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Open All Year. : A. VAN DER NAILLEN, Pres't.  
Assaying of Ores, \$25; Bullion and Chlorination Assay, \$25; Blowpipe Assay, \$10. Full course of assaying, \$50. Established 1864. Send for Circular.

**Exterminating Squirrels.**

No poisonous compounds used; sure death, and failure is unknown; material used costs nothing. Information free.

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**LUELLING ALMONDS, JAPANESE WINEBERRIES, EVERGREEN BLACKBERRIES.**

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**PALESTINE CORN** Is hard to beat. Can be planted till June. Yields about 2,000 lbs. corn and 12 tons excellent fodder per acre on dry land. Can be harvested with combined harvester. Send \$1 per acre for seed desired. Address: SACRAMENTO RIVER NURSERY CO., WALNUT GROVE, CALIF.

**TREES** A FINE ASSORTMENT, best varieties, free from pests of any kind. Prunus Simoni, Bing, Kistner and Murdoch Cherries; Black California Figs; Rice Soft Shell and other Almonds; American Sweet Chestnuts; Prepariturnus Walnuts. Hardy mountain grown Orange Trees. Our oranges have stood 23 degrees this winter without injury. Dollar Strawberry, the best berry for home use or market. Address: C. M. SILVA & SON, Lincoln, Placer County California.

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—A San Joaquin valley land-owner has offered to place 200,000 acres of fertile land at the disposal of the New England Colony Association on terms of interest only, for ten years, provided all the land suitable for cultivation in small tracts should be taken and occupied within two years. The object is to bring to California the native element of the Atlantic seaboard, who have been displaced by European immigration.

—A San Jose fruit-packing company has bought American rights for a new German method of preserving fruit in glass jars, with covers kept on by exhaustion of air in the jar. No solder is needed, and in opening the jar all that is necessary is to puncture the covers. Many million dollars' worth of tin plate is imported every year for canning fruit, vegetables and fish, and if the new process is successful this money will be spent here for glass jars.

—The California State Board of Trade has decided not to send an exhibit to Mexico, but to send one to the Atlanta Exposition. The following directors were elected to serve for a year: J. S. Emery, B. M. Lelong, Hon. L. W. Buck, J. Morrissey, J. S. Stabler, W. H. Mills, N. P. Chipman, J. P. Irish, C. M. Wooster, L. C. McAfee, M. L. McDonald.

—China and Japan are beginning to use more flour. England took 400,000 barrels less in '94 than in '93; China took 33,000 barrels more; all Asia 67,000 more, an aggregate of 698,878 barrels having been imported into that region last year. Japan is building flouring mills, and this year will probably see coast wheat cargoes sent to China and Japan.

**How's This!**

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligation made by his firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O. WALKING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75c. per bottle. Sold by all Druggists. Testimonials free.

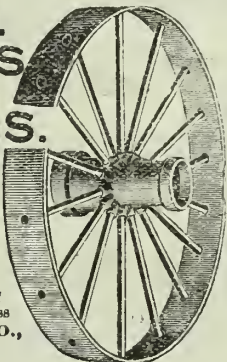
—The Chino sugar factory consumes 1000 tons of sugar beets daily, and turns out 135 tons refined sugar per day. The factory cost \$1,100,000. An oil pipe line is now building to supply it with fuel from the Puente wells. Three 17,000-barrel tanks will be used, and fourteen miles of 3-inch pipe.

## Horse Owners! Try GOMBAULT'S Caustic Balsam

A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.  
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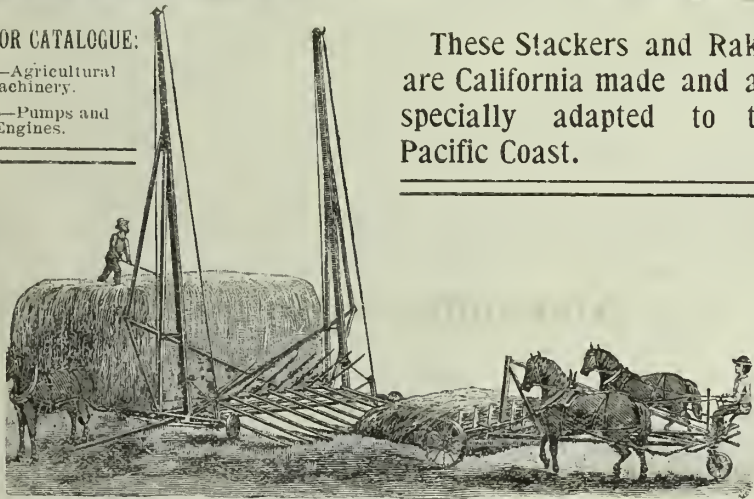
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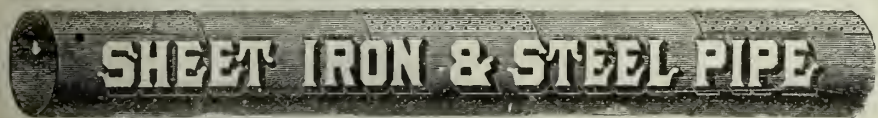
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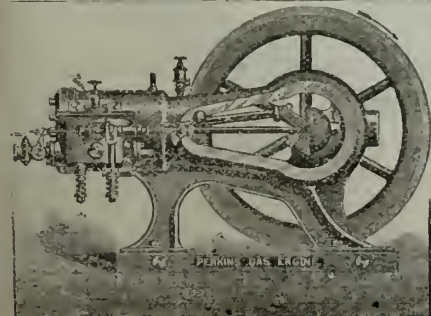
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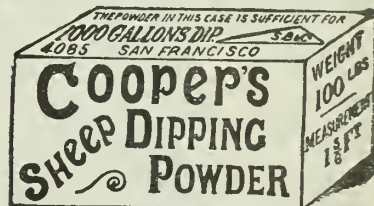
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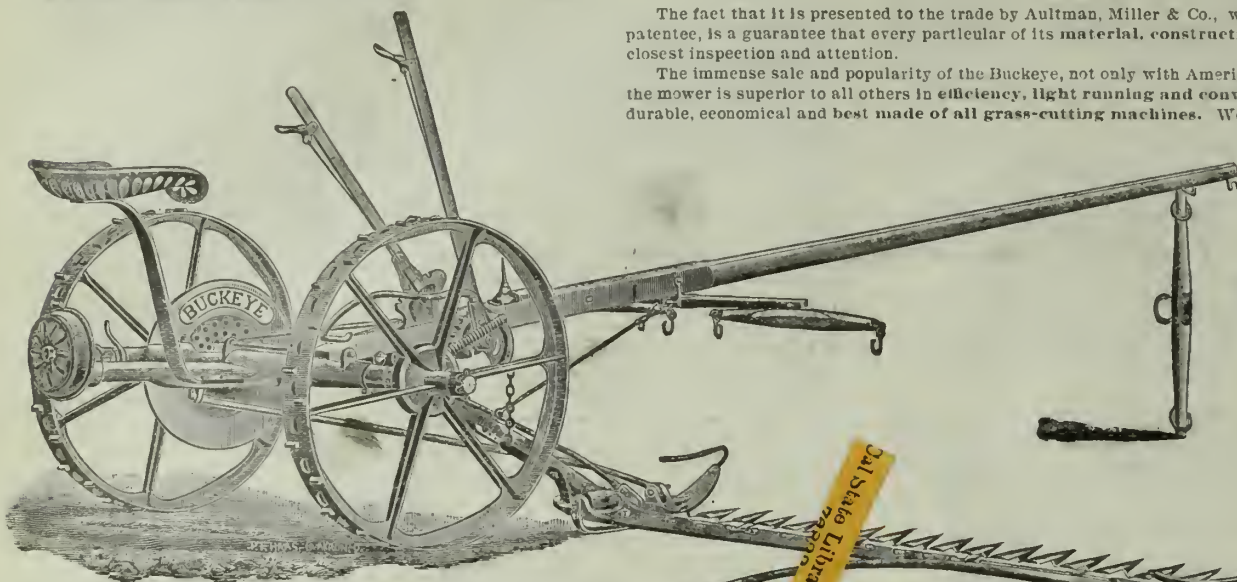
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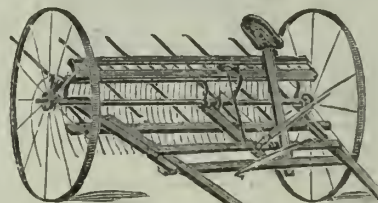
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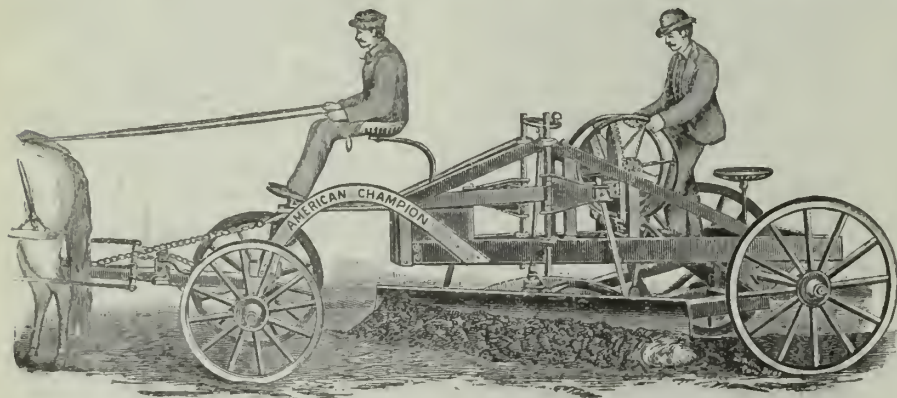
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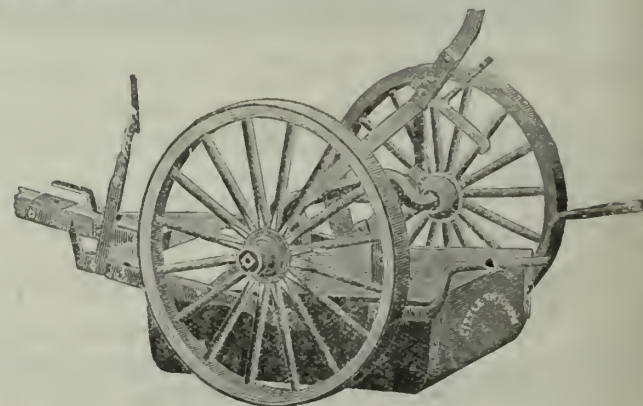
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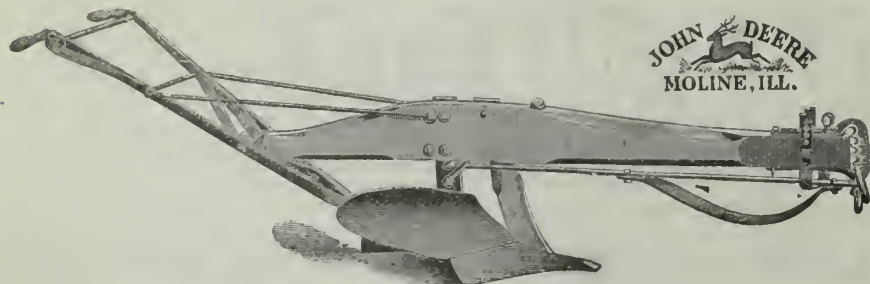


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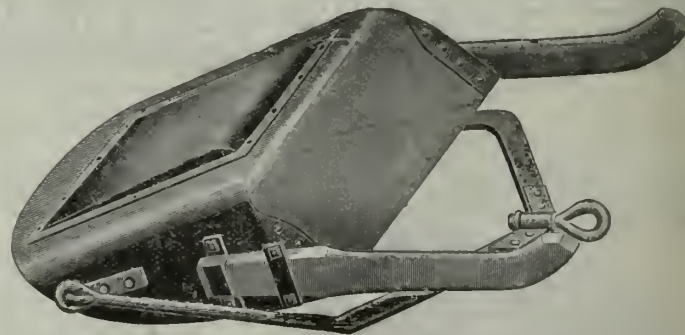
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 17.

SAN FRANCISCO, SATURDAY, APRIL 27, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

### On Russian River.

The coast region north of San Francisco is quite well appreciated by the residents of the metropolis and its suburbs, and a good portion of their outings is sought in that direction; but to the State at large, that unique and interesting part of the State is not well known. It is unique in its vegetation, for there the rich vegetation of the more humid northern regions of the coast reaches farthest to the southward. Not only are the plants largely different from those constituting the chief parts of California flora, but their blooming season is later or longer, so that while the greater part of the State

has exchanged the greens, and reds and blues of its floral robe of spring-time for the browns and yellows of summer the north coast still retains much of the former hues. It is true, of course, that the high mountain valleys of the interior also have a late blooming season, but their plants are different and their season begins late and has not the duration of the upper coast regions. For these reasons northward courses from San Francisco will yield novelty and delight even to those who have seen

most of the other quarters of the State.

Formerly the outing region northward from the city was largely confined to those picturesque beaches, vales and forests reached by the narrow gauge railroad which extends the length of Marin county and finds its terminus in the redwoods on the coast of Sonoma county. This region naturally is still largely visited and always will be, for it is indeed a charming region. More recently the extension of the broad gauge San Francisco and North Pacific line from Cloverdale northward into the delightful haunts of Mendocino county has enabled people to press farther north and find the charms of the coast region associated with a more genial warmth than the immediate coast usually affords; consequently many people are won to the restful and recreative influences of open-air life in these picturesque localities which are separated by a high range from the harsher conditions of the coast. It is true that they lose the salt-water bathing and fishing, but they have in exchange the river bathing and river sport.

It is a great advantage to the metropolis to have such a difference of conditions within easy access.

The Russian river scenery, of which the engraving on this page presents a single phase, is varied and entrancing. Taking the waters from several fine valleys on the east side of Mendocino county, it flows southerly for a considerable distance through rich meadows before it enters the romantic gorge which carries its waters through the mountains to Cloverdale. Below this point it is swelled by streams from Lake county and northern Sonoma, and is a noble river as it takes its way through the redwood region westerly to the Pacific. All along the river there are most delightful stretches amid an almost infinite

### Advantage of Ownership.

Since the close times have been affecting farm industries, it has become more and more apparent that the farmer who owns his land and follows a mixed system of husbandry, which goes very far in supplying the actual food wants of his household, is getting the very best there is in a trying situation. Every one grants this fact. It seems to signify more than the mere possession of capital to the amount at which the farm is valued, for many land renters have more capital invested in horses, machinery, etc., than would buy outright a farm which, if wisely conducted, would provide a comfortable

living for his family. The man, then, who owns a good farm has not only capital but he has a profitable business in which that capital is employed. Evidently one who in these times has capital profitably employed is getting the best of what comfort there is going. In the long run, worth while to have these hard times if they will only impress on Californians the superiority of old-fashioned farm ownership and farm living as compared with the speculative style of land cropping



STILL-WATER FISHING ON RUSSIAN RIVER, NEAR ECHO STATION, IN MENDOCINO COUNTY

variety of environment. The engraving, which shows the river near Echo station on the San Francisco and North Pacific Railway, exhibits the river in one of its quieter moods where, amid low hills, it affords sport for the still-water fisherman who stands in the midst of its cooling flood. In other portions it rushes through rocky beds with tumultuous flow and at others it threads quiet meadows or flows beneath the dense cover of primeval forest which here and there has still escaped the enterprise of the millmen. To one who is led to believe from the sight of our sluggish, tule-bordered streams of the great valley, that we have no true rivers in California, the Russian river would be an awakening and a delight. We have other grand rivers, of course; and even the Sacramento, far enough away from the degradation of its tule passages, is as fine a river as one could seek, with its clearly cut banks and crystal waters. The Russian river is, however, the largest fine stream within easy reach of San Francisco, and our people should become more familiar with its charms.

which we have been indulging in so freely for the last twenty years in California.

In view of this conclusion, it is interesting to state the general condition of farm ownership as disclosed by the last census of the United States. A summary of the statistics shows that there are 12,690,197 families in the United States, and of these families 52% hire their farms or homes and 48% own them, while 28% of the owning families own subject to incumbrance and 72% own free of incumbrance. Among 100 families, on the average, 52% hire their farms or homes, 13% own with incumbrance and 35% without incumbrance. In regard to the families occupying farms, the conclusion is that 34% of the families hire and 66% own the farms cultivated by them; that 28% of the owning families own subject to incumbrance, and 72% own free of incumbrance. It is gratifying indeed to see that while current commentators claim that most farms are mortgaged beyond their value, the fact is nearly one-half are not mortgaged at all.



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Registered at S. F. Postoffice as second-class mail matter.

ALFRED HOLMAN, Editor.  
E. J. WICKSON, Special Contributor.

San Francisco, April 27, 1895.

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## The Week.

### Weather and Crops

The weekly weather and crop re- view by Sergt. Barwick of Sacra- mento may be found upon a follow-

ing page. It gives local situations in detail up to the close of last week. Though no very unfavorable conditions have arisen, it is evident that a softer mood on the part of weather agencies is greatly to be desired. We are not yet getting the spring rains which are essential to good field crops, and it is rather late in the season. As a rule grain is back- ward and short, and moisture, followed by warm growing weather, is now the general need. As we write on Wednesday, though the sky is threatening, the observers do not promise much in the way of rain. Still it may come, and, if dry winds would cease, very good growth could be made if the baking surface were staked down by a fraction of an inch of water. Judging by the normal rain of the second week of April this year, the deficiency ranges from one-quarter to one-half an inch through the cul- tivated parts of the State. There is some uneasiness now felt by those who are watching crops, but, fortunately, a good smart shower would dispel it.

### Depression in Local Wheat.

The unfavorable turn in the San Francisco wheat market this week is due to a report that the large stock in the hands of "the deal" is about to be sold. There is stored in the warehouses at Port Costa at the present time about 250,000 tons of wheat. Of this amount there are not less than 200,000 tons that belong to what is known among grain speculators "on Change" as "the deal." This vast amount of grain is under the immediate control of L. W. Me- Groun, but it is generally believed to be the prop- erty of the Fair Estate. The court which has authority in the affairs of this estate, is about to order the sale of this vast store and it is feared that the intrusion of such a quantity will break the market and run up the price of tonnage. How much truth there may be in these reports it is impossible to say, but they are sufficiently credited to weaken the wheat market and stiffen charter rates.

### State Flower Show.

The great floral event of the springtime in this city will be the Rose Show of the State Floral Society, which will be held in the maple and marble rooms of the Palace Hotel on May 2, 3 and 4. Great preparations are being made for the exhibition, both by the members of the society and those who are enthusiasts on the subject of rare and beautiful gar- den and hothouse plants. While the roses will be the leading feature of the show hundreds of other flowers will be exhibited. The committee of arrangements is composed of Professor Emory E. Smith of Palo Alto, Mrs. Austin Sperry of 2100 Pacific avenue, Mrs. Helen A. A. Cross of 715 Wal-

ter street, Mrs. Amos McCartney of Alameda and Mrs. Orville D. Baldwin of 3700 Washington street, S. F. The committee is highly gratified by receiv- ing twenty-five applications for space at this early day, as it is not usual for applications to come in until just before the exhibition opens. It is believed that altogether there will be between seventy-five and eighty exhibitors, each of whom will present many varieties of flowers and plants.

### Wheat and Hogs.

The advance in the price of hogs in the Eastern markets, says the *Rural Northrest*, is helping out the farmers in eastern Oregon and Washington ma- terially. The farmers about Colfax, Wash., who have been feeding a good many hogs on wheat had become pretty badly discouraged by the low price of about two cents per pound which prevailed up to a few weeks ago, as this meant only about 20 to 24 cents a bushel for the wheat fed. Since the ad- vance they have been selling to buyers for Eastern shipment at from 24 to 3 cents per pound. This will give them from 30 to 35 cents per bushel for the wheat consumed by the hogs.

### Injurious Exaggeration

If the Eastern journals were more discriminating in what they print, California would not have such a notoriety for lying. Where the abominable exag- gerations come from originally we cannot tell, but the recitation of them by reputable journals hurts us in many ways. For example, we read in the *New York Produce Exchange Reporter* that a man in south- ern California does this:

He is said to own the largest orchard in the world. It is a tract of 1700 acres in extent, containing 10,000 olive trees, 5100 being in full bearing and the remainder are young trees set out during the past year and a half. Besides the olive trees, there are 3000 English walnut trees, 4500 Japanese persimmon trees, 10,000 almond trees, and about 4000 other fruit and nut trees. The 10,000 olive trees yielded 40,000 quart bottles of olive oil last year, which found a ready market at 50c a bottle. The nut trees bore thousands of bushels of nuts, to say nothing of the Japanese persimmons. Taken all in all, it has been calculated that the orchard brings the owner an income of not less than \$750 per acre every year—\$1,275,000.

Think of it: the whole 1700 acres, unbearing trees, pasture lands, creek beds, roadways, corrals, posy beds, woodsheds, etc., return \$750 per acre, and the whole tract a million and a quarter a year, or per- haps three times as much as the whole tract with all its improvements is worth. While such things are being printed, it is little wonder that reasonable people say they cannot believe anything about Cali- fornia.

### Cannery Movement

There seems reason to hope that the fruit canneries will do much more this year than they did last year. Some at least of the Oregon canneries will operate this year. Last year there were seven which did not operate. In this State some of the small canneries which did not run last year will be fired up. What the large California establishments propose for this year we have not yet heard.

### Tree Whitewash.

In answer to those who are writ- ing us about whitewash to repel insects and prevent sunburn on stems and large branches of fruit trees, we cite the recommendation of Prof. Washburn of the station at Corvallis, Oregon, who advises to make a white- wash of about the consistency of paint, and should add to it Paris green at the rate of a tablespoonful for every five gallons and some glue in solution—about one quart to every five gallons. Apply this with a brush about the trunk as far up as larger branches and slush it liberally round the collar. This ought to last fairly well throughout the summer, though a second application early in August would not be out of place. He has added at times one-half pint of crude carbolic acid to every five gallons of the above wash to serve as an additional repellent.

### Fruit Shipping Preparations.

Though the railway managers did not give the growers either much comfort or courtesy in the re- sponse to their request for better and more reason- able service it is reported that much is being done in the way of preparations to handle a greater amount of fruit than has been shipped hitherto. At Sacramento the freight sheds used for the transfer of fruit from the steamers to the cars are being ex- tended 400 feet, and when completed will be 700 feet long. At Tracy the large tanks between the main tracks and the freight tracks are being removed, making place for additional tracks. A concrete foundation is being built on which to place one tank just east of the pump-house, and another 50,000- gallon tank-house is being constructed west of the station. A Y will be placed between the rails to Stockton and the road up the west side, and most of the switching and making up of trains will be done at the extreme west end of the yards. Changes are also to be made at Truckee in the tracks for the better handling of fruit. As the season will open on May 15th, most of these improvements must be com- pleted before that date.

## From an Independent Standpoint.

A good deal of noise is being made about Gov. Budd's veto of the bill appropriating State money in support of the District Agricultural Fairs, so-called; but so far as we can hear none of it comes from the agricultural class. Each month the RURAL PRESS receives some hundreds of letters from farm- ers, but thus far since the veto—a month ago—not one in protest against the Governor's action. Within this time the editor has personally visited half the counties in the State, talking everywhere with farm- ers, but he has not heard a word from any of them in criticism of the veto. None of the farmers' associ- ations—neither the Grange, the Alliance nor the Institutes—so far as we can learn, has had a word to say against the veto. On the other hand, a pro- digeous howl has gone up from the organs of the racing interest. The journals devoted to the race track and its dependent "industries" are violent in their condemnation, and echoes of it may be heard in bar-rooms, pool-rooms and in sporting places gen- erally. Just why this should be it is not easy to understand—that is, if we take the sporting gentry at their own word. They have always maintained, and still stoutly declare that their part in the "agricultural" fairs is more than self-supporting and that the racing feature has consumed no share of the aid hitherto given the fairs by the State. And yet, strangely enough, we always find that the lobby at Sacramento is full of racing men strenuously working for the Dis- trict Fair appropriation bill; and now, when it has been killed by a veto, we find them to be the chief mourners. Under all the circumstances, we are compelled to infer that this fiery indignation and touching grief proceeds wholly from a fine enthusiasm for the suffering cause of "agriculture." The strange part of it is that the farmers of the State should be so dense as seemingly not to care anything about it.

The arrest of Mr. C. P. Huntington on a charge of having given a railroad pass to Frank M. Stone of San Francisco in violation of the Interstate Com- merce Law is being made much of by a class of newspapers which makes a trade of "going for" the railroad company. The giving of the pass prob- ably was illegal, but it is a trifling thing totally un- worthy the noise made about it; and in the very common sense of things, the case against Mr. Hun- tington will come to nothing. A newspaper which really wants its criticism of the railroad to accom- plish something does not waste its fire, but reserves it until there is game of importance in sight. It is of no consequence that Mr. Stone was given a pass, but it is of much consequence that it was given him in promotion of a corrupt effort to elect an unworthy man United States Senator. To make much of the trifle of the pass, and to leave untouched the corrupt job out of which it grew, is to strain at a gnat and swallow a camel. Mr. Huntington can afford to en- courage and reward such criticism, for, while it con- cerns itself with trifles, large schemes of public in- justice may be pushed along unnoticed. The critic whose criticism of the railroad is a public benefit is not he who makes a great outcry about petty matters, and who heaps personal abuse upon rail- road officials, but he who calmly watches the rail- road policy, who is fair in his approval of its good doings and without fear in his condemnation of its bad doings. The critic who does good is not he who flies into a rage because he gets bad butter in a dining car, who finds a bug in his sleeping section, or whose baggage has gone astray, but he who challenges the railroad for corrupting our politics and for its arbitrary and oppressive business acts. Mr. Huntington suffers less from the loud vulgarity of a hundred demagogues than from the plain and fearless utterance of one discriminating, temperate and just critic.

The RURAL observes with profound satisfaction the multiplication of signs that the period of stagnation, with its low and unprofitable prices, is approaching its end and that we appear to be on the eve of the good times that have always followed similar seasons of depression in the past. These indications of com- ing prosperity, while not of a pronounced character, are nevertheless sufficient to lead to the belief that



they are forerunners of a higher range of prices for the staple commodities of the country, and of better profits for those engaged in their production. As regards some important branches of industry, however,—notably most forms of agriculture—it may be said that profits of late have quite vanished, and in the great staple—wheat—the question which confronts growers is not as to profit, more or less, but rather as to how they are to meet their losses and keep their heads above water. This experience, though new to the present generation of American farmers, is but the repetition of that of their predecessors. Going back to the early years of the century we find that owing to the low prices of farm products, due to hard times, the average price of agricultural land in Pennsylvania fell from \$150 per acre in 1815 to \$35 per acre four years later, at which time flour sold in Pittsburgh at \$1 per barrel. For the seven years ended with 1843 wheat in the New York market declined eighty cents per bushel, or from \$1.78 to \$.98. In 1855 the price reached the highest figure of the century—\$2.43 per bushel. Almost equally wide fluctuations in prices occurred during the same time in other agricultural products, and for the past forty years the ups and downs in prices have been quite as violent as they were during the preceding half century. There seems no reason to suppose, therefore, that what is termed the era of low prices now existing is to become a permanent feature in trade and production.

As to the signs of better times to which reference has been made, they can best be discerned perhaps in the New York and London stock markets. Although the operators in Wall street are not much in favor elsewhere, they are, it must be admitted, shrewd observers of indications of public prosperity or adversity, their success depending upon the accuracy with which they gauge the future of trade and finance. That this class, both in New York and London, together with many investors, entertain more hopeful views, is indicated by the buoyancy in the stocks and bonds of late under steadily advancing prices. The outcry heard in Europe against American investments is becoming fainter, and such investments seem to be growing in favor once more. While the recent marked advance in petroleum may be to some extent unwarranted and based on monopoly and speculation, there are other staples—cotton, iron and leather—for which there is a healthy and rising market. Cattle are advancing in price, and even that long-neglected staple, wheat, gives promise of improvement. The situation, as a whole, from a conservative standpoint must, we think, be regarded as more hopeful.

### Gleanings.

THE people of San Miguel and vicinity are circulating a petition praying for a reduction of the freight on grain.

A WORM resembling the army worm has appeared at National City. It destroys potatoes and other vegetables.

THERE never was such a favorable time for breeding, says the *Spirit of the Hub*, as at present. The cry is abroad now that really good trotters and roadsters are scarce, as loud as was that other wail three years ago that the bottom was out of the business. While prices dropped, real value did not.

FARMERS about Tremont, Solano county, says a local correspondent, are paying more attention to the cultivation of barley every year. It has been proved by experience that barley pays better than wheat, even when it is as low as at present. One thing in its favor is that a good, heavy crop can be raised every year, providing the season is reasonably favorable.

HANFORD *Sentinel*: J. B. and W. J. Newport have sown their youngest vineyards to wheat. They will hoe around the vines for a space of two or three feet, so that the vines will grow and bear a crop. They will then turn their hogs in to fatten on the wheat and grapes. This is one way to get returns from a vineyard with but little labor until the raisin business gets on its feet. It is certainly better than digging up the vines.

SAN JOSE *Mercury*: Last year the buyers of green fruit were generally nipped, so that they are decidedly wary this far this season. There will probably not be much speculation in advance in green fruit this year. Reports came from Vacaville, however, that Senator Buck is contracting to pay \$90 a ton for green apricots. Last year from \$20 to \$25 a ton was realized. The advance is due to the present short crop. The loss by frost around Vacaville was greater than anywhere in the Santa Clara valley.

THE Santa Clara Fruit Exchange is cleaned out of about everything excepting twenty-five carloads of prunes, and is now engaged in settling up with its 600 stockholders, most of whom marketed last season's crop through the Exchange. The entire amount of dried fruit in Santa Clara valley does not exceed 125 carloads. Everything else has been moved out

into consumptive channels. At the same time last year there was about the same amount remaining unsold, but many owners had disposed of their fruit to speculators, and it was not moved out till recently. At the Exchange warehouse a carload of fancy prunes is being put up very attractively to order in twenty-five pound boxes. Among the sales last week a carload of prunes was shipped to Omaha, another to St. Paul and a carload of peaches was sent to Chicago. Since the apricots have been all cleared out, there have been orders for that fruit from various directions which, of course, could not be filled.

BAKERSFIELD *Californian*: The RURAL PRESS continues to publish figures on the cost of wheat-growing, in which the burden of the song is "It don't pay." But the heaviest item of alleged cost in almost every case is the interest charge on the value of the land. This is put usually at 7%, and the alleged "value" runs all the way from \$20 to \$125 an acre. Since actual money only commands about 3% interest now-a-days, and the lands in question did not average the owners anywhere near the figures they give as "value," it is evident that this interest charge is altogether too high.

CHICO *Chronicle-Record*: Col. Royce, general manager for Rancho Chico, has been lately making some extensive and thorough changes in the orchards of this celebrated ranch. He is changing the nectarine orchards, comprising many acres, into prunes by a new system of grafting, which he is confident will produce the best of results. Col. Royce has secured a man who has given grafting much study to do the work, and it will be well worth while for orchardists to see the system in operation. About 3000 almond trees are to be grafted to French prunes and quite an acreage of apricots to the same fruit.

THE Tremont correspondent of the *Dixon Tribune* is sarcastic. He says: We can truthfully say that this is one section of the country that has refrained from agitating the question of building a creamery, and the present indications are that it never will be done. Our people are making money hand over fist selling butter at sixteen cents a roll, and don't consider it necessary to make all the money. It is something worth knowing that if fresh butter is taken through a certain process it makes a very fair substitute for lard. We will take pleasure in giving this precious secret to the public if Maine Prairie wants us to.

RIVERSIDE letter: Riverside has decided to form a horticultural club in keeping with the recommendations of Profs. Cook and Hilgard at the late Farmers' Institute. A meeting was held Saturday afternoon by a number interested and the preliminary steps were taken. It was thought best to organize a local club at first, and then later either merge it into a county organization or form an independent county organization. E. L. Koethen, J. H. Reed and G. W. Gartelton were made a committee on permanent organization, and William Irving, Rev. Edmiston and J. P. Bumgartner were selected as a permanent committee on programme. The two committees are to confer as to the time and place of holding the next meeting.

LOS ANGELES *Times*: The action of the exchanges in reducing the quotations on seedling oranges resulted in increasing the demand for this variety of fruit in the East, although sales are not yet what the growers might wish. The demand for choice and fancy oranges continues good at steady prices. It is evident that during the next few years the southern California fruit exchanges will have about all they can do to find an outlet for the crop of this section, which, unless there should come any unforeseen calamity in the line of a severe frost or high wind, promises to be a very large one next year, as a large acreage of new orchards will come into bearing. Besides this, many of the orchards which have only recently begun to bear should give a largely increased yield.

THE Orange Growers' Exchanges of southern California have under consideration a plan that is not only feasible, but can readily be put into operation. It is simple and direct, and the cost to the individual grower is a mere bagatelle. It has been proposed that the Exchanges set aside \$1 for each carload of fruit shipped, to be used as a fund for the purpose of sending an expert abroad to continue the search for beneficial insects. If this plan is adopted, the aggregate sum from all the Exchanges would be about \$4000, that being approximately the number of carloads controlled. This plan could be kept up indefinitely, and the growers would thus secure sufficient money with which to carry on a systematic and intelligent search for additional insect friends. We hope to see the plan carried out, and believe it has the element of success in it. It has been endorsed by the Southern California Association of Horticulture Commissioners.

SACRAMENTO *Record-Union*: In order to meet the increasing demand upon it the Southern Pacific Company has found it necessary to add to its facilities for the rapid handling of fresh fruit, which must be loaded upon cars and dispatched with the greatest possible speed. The company is extending its sheds at the steamer landing 400 feet farther north, and piles are being driven for that purpose. Three elevators are being placed in the shed, so that three hoists can unload their fruit at the same time. \* \* \* The company also contemplates establishing a big storage yard between the American river and Ben Ali station, with a capacity of 2000 or more cars. As this is the distributing center for fruit cars for the whole of the State, there are during the fruit season from 500 to 3000 refrigerator and other cars here, and the company is often at a loss where to keep them till they are wanted. The proposed yard, work on which will be commenced in a few days, will solve the problem and relieve the blockade of the city yard at such times.

THERE is current in California a report that the Walter A. Wood Co., widely known manufacturers of harvesting machinery, is bankrupt; and it has been further declared that their factories were shut down and that the Wood machines would not be offered in the California market this season. Nothing could be further from the truth. The great plants of the Wood Companies at Hoosic Falls, N. Y., and at St. Paul, Minnesota, are in active operation as usual and will this season turn out as many machines as in any former year in their history. In California, as elsewhere, the Wood machines will be sold as usual, the only difference being that the San Francisco agency has been transferred from Frank Bros.—who are retiring from business—to the well-known firm of Allison, Neff & Co., Nos. 421 and 423 Market street. There are two Walter A. Wood Companies—the original com-

pany founded in 1857 and operating east of the Mississippi river and in foreign countries, the other operating in the United States west of the Mississippi. The western company built very extensive works some two or three years ago, and, being involved somewhat in payments for them, has sought the protection of a receivership. Under this arrangement, which is temporary and wholly friendly, the company is in the best possible shape to do business and is, in fact, doing it as usual. Mr. C. E. Blake, who has general supervision of the Walter A. Wood Companies' business in California and Arizona, has been in San Francisco during the past week arranging for the season's work; and he assures us that the company expects to sell as many machines in California in 1895 as in any former year. Allison, Neff & Co., 421 and 423 Market St., have a complete line of Wood machines with a stock of repairs equal to any possible call from users of Wood machines of all styles as far back as 1860. They will supply catalogues for 1895 and any other information to whoever may apply.

OROVILLE *Register*: Just now all California is coming to the front in making known to the rest of the world her climate, soil and resources. Every town and hamlet from the metropolis at the Golden Gate to the most insignificant mining camp or cross-roads town in the State is doing something to arrest public attention. San Francisco has set the example and the rest of the State has caught the boom fever. Every paper is whooping up its home and every real estate agent is standing on the hill top and yelling at the top of his voice: "Right this way for your pick of the finest land beneath the sun. Here is the ideal California paradise, where the fig bears three crops a year and alfalfa yields ten tons to the acre. Here is the land of cloudless skies and sunshine; here is the place where you pick strawberries nine months in the year, and oranges and lemons the other three. Right this way, gentlemen, if you wish to buy the best land on earth at the lowest market price." California is alive and energetic, and means to make known to the blizzard-stricken, cold-pinched people of the East that right here is the home they desire.

BIGGS *Argus*: Wm. Grant, manager of the large ranch of Balfour, Guthrie & Co., just west of the town, has started the wheel of progress in diversified farming. It is to be hoped that other farmers who have learned the lesson that large fortunes made in wheat growing is something of the past, will follow in his lead and bring about a new era in farming. The success met with in growing the Russian sunflower in Europe and the value of the seed in the production of an oil, which is but slightly inferior to olive oil, the value of the same as food for stock, and also a certain preparation for infants, has become generally known in the old countries, and Mr. Grant has such strong faith that the productive soil of Butte county will be found adaptable for the culture of this new grain that he has imported sufficient seed to plant forty acres as an experiment, the work of planting and covering having been concluded this week. He expects to realize about fifty bushels to the acre. The heads of this variety of sunflower average from six inches to a foot across, and the seeds average in size about the same as an ordinary bean. It is stated that a bushel of these seeds will produce a gallon of oil, which is claimed to be a very excellent article for many purposes. Mr. Grant has also planted an acre of ground in canary seed, from which he expects good returns.

MR. W. E. COLLINS writes as follows to the *Pomona Progress* under date of 9th inst: Some inquiries have been made as to the truth of the statements in one of the Los Angeles dailies, to the effect that at its session last Wednesday the executive board of the Southern California Exchanges threw up the sponge on Seedlings and resolved to allow the growers or exchanges to market that fruit as they choose, and that as a consequence a large number of carloads were going forward on consignment. As to the first proposition, there is absolutely no truth in it. The executive board simply withdrew all quotations on Seedlings. There has not been a car consigned by any of the exchanges. The executive board has no power to relieve the Seedling growers of their obligations to the associations of which they are members. If they had and did so, it would be the end of the whole system. Instead of tumbling over one another in their eagerness to consign their fruit, the Seedling growers realize that there is no salvation in that method and stand loyally by their associations. Does not this prove that the exchange movement is stronger and the recognized bulwark of the situation? As to the second proposition, one shipper had a large number of cars in Chicago and has since been shipping heavily and has acknowledged that he has offered as low as 80 cents per box f. o. b. Chicago, or 10 cents less than the freights. Perhaps these are the consignments that are spoken of.

MR. E. C. CHAPMAN, who owns a fine orchard near San Jose, has been explaining to a *Mercury* reporter how it is that his trees look better and bear better than most trees and he contrives to raise high-priced fruit. He says: "It is easily explained, sir. I irrigate and cultivate; I feed and water my trees and keep them clean. You've got to do that with man, beast, bird, vegetable or tree, if you want them to thrive. Don't you see? Now, just suppose that you were not fed and watered regularly, and the flies not encouraged to keep away from you, where would you be? It's just the same with a tree. My cultivators are going nearly all the time. That keeps the weeds down and the soil in proper condition to supply the necessary food to the trees. Then I give them a drink at regular intervals by turning an 800-gallon-a-minute stream loose on their roots. When the festive worm blows himself in on my trees from some other orchard I have a man and a boy here who sweeps them off by tapping the limb of the tree gently with a pole. That's what I call giving the trees a bath. I then place a band of tin, as you see, around the tree near the ground and paint it with printers' ink. Paper will answer just as well as tin, but it is not as cheap in the long run. The process is inexpensive, and is particularly discouraging to worms. The result of all this is that my trees do their duty every time, and my fruit is always choice and brings the highest prices. I got 6 cents for prunes last year when other fruit-growers in this locality were compelled to sell for from 3½ to 5 cents. Another pleasing and profitable result of this system of fruit-growing is shown in the appearance of my apricots. When the frost came and found blossoms to destroy on trees in other orchards the fruit had formed on mine, and Jack Frost had to throw up the sponge and give my apricots the 'go by.' I regard the appearance of my apricot trees, filled with fruit as they are, as an unanswerable argument in favor of my method of running an orchard."



## Rainfall and Temperature.

The following data for the week ending 5 A. M., April 24, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week. | Total Seasonal Rain-fall to Date. | Total Seasonal Rain-fall Last Year to Same Date. | Average Seasonal Rain-fall to Date. | Maximum Temperature for the Week. | Minimum Temperature for the Week. |
|----------------------|------------------------------|-----------------------------------|--------------------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|
| Eureka               | 07                           | 39.09                             | 50.42                                            | 29.30                               | 68                                | 38                                |
| Red Bluff            | 27                           | 07                                | 10.15                                            | 23.28                               | 92                                | 48                                |
| Sacramento           | 22                           | 98                                | 13.85                                            | 19.68                               | 96                                | 48                                |
| San Francisco        | 23                           | 98                                | 16.11                                            | 23.97                               | 72                                | 48                                |
| Fresno               | 12                           | 60                                | 6.17                                             | 10.37                               | 92                                | 48                                |
| Los Angeles          | 05                           | 15.41                             | 6.46                                             | 19.04                               | 74                                | 50                                |
| San Diego            | 11                           | 39                                | 4.03                                             | 10.23                               | 80                                | 50                                |
| Yuma                 | 2                            | 97                                | 2.16                                             | 3.51                                | 94                                | 54                                |

## Weather and Crops.

Report for the Week Ending 22nd Inst. Compiled by the State Weather Office, J. A. Barwick, Director.

## San Joaquin Valley.

SAN JOAQUIN (Lodi)—Weather continues favorable to all crops. Grain looks well, what there is of it—not one-half the usual acreage. Peaches and apricots are poor. Almonds are dropping badly. From present appearances the fruit crop will not be up to the average. Pasture is good. (Bethany)—The warm weather of the week has caused the crop to ripen quite fast and much of it is now ready for hay. The late grain will not amount to anything without it has more rain.

STANISLAUS (Turlock)—We had very high winds all week and they are drying the ground too rapidly. Another light rain now would do much good. All grain crops are making very rapid growth. Rye will do to cut for hay now. (Westley)—Early-sown grain doing well. The north wind of the past few days kept the late-sown grain backward and it must have rain before the month is out. Early-sown barley is heading out. (Newman)—Crops are very good. (Crows Landing)—Crops are looking very satisfactory.

MERCED (Livingston)—Wheat any rye crops are doing well, and with a little more rain the farmers feel confident of a good yield. (Merced)—The weather has been splendid for crops in this section. Grain that looked yellow and to be suffering has revived, and everything thus far points to a large crop.

MADERA (Raymond)—Hay and grain growing fine. Fruit damaged to a small extent by frost.

FRESNO (Reedley)—Good growing weather. Late-sown grain growing fast, but will need more showers to make a good crop. Vines are putting out new growth very fast. (Fresno)—The week's weather has been favorable to growing crops. (Huron)—Crop prospects very good. In the sink of Poso, two miles northwest of here, there are ten to twelve thousand acres all in wheat and barley. No grain will be raised on the plains. Sheep feed drying up very fast. (Easton)—Grain is growing well and in many places is overtopping the weeds that a few weeks ago threatened its existence. Grape vines of all varieties are now making a rapid growth.

TULARE (Visalia)—The wheat in the Tule river country is looking fine. The greatest part of the acreage will make grain whether it rains again or not. If a good rain falls during the month an immense crop will be assured. Rain is needed in the Tipton country. (Porterville)—The grain needs rain, as the shower of last week was followed by a drying north wind. It did some good but more is in demand as grain will be shortened without it. (Lindsay)—Grain cutting for hay will begin inside of ten days. (Lime Kiln)—Past week has been, on the whole, warm and clear, with prevailing wind from southwest. Grain and hay need rain or they will suffer from now on. Hay will soon be ready for cutting and a good shower of rain will make a big difference in the yield. Pasture is beginning to dry up on the hillsides. The highest temperature was 84° on the 13th and the lowest 40° on the 15th. Orchardists are busy plowing, cultivating, and planting citrus trees and getting ditches in shape for irrigation. (Tulare)—Grain crops look better on account of last rain, but the soil is drying fast on account of steady northwest wind. Apricots scarce. Peaches small crop. Prunes light. Nectarines lighter than usual. Almonds gone. Grape vines beginning to grow the second time. Grain in irrigated district looking fine; on upland or unirrigated it needs more rain to fill out. (Goshen)—The drouth is shortening the grain crop very much and unless we have rain very soon both wheat and barley will not fill out as was expected. Fruit is doing nicely where it wasn't destroyed by frost, and in some places it will need thinning out. Hay is going to be a good crop about here.

KERN (Bakersfield)—Some hay has been stacked in good condition. Some rust has made its appearance on fruit trees, and it is thought they became susceptible to it by injury from frost.

## Sacramento Valley.

TEHAMA (Red Bluff)—A careful investigation of the fruit crop of this county shows that prunes will be hardly over half a crop. Prunes in most all the orchards are dropping badly. There will be hardly any apricots or cherries. Peaches and almonds promise a large crop. Pears will yield less than an average crop. Late sown rain is suffering for want of rain; otherwise grain holds out well. (Corning)—Unless where grain is thick and high, where it had an early start, the grain crops have not advanced as much as farmers would wish. But the warm weather has commenced, and a few days more will make a great difference.

Butte (Union)—The almond crop promises to be above the average this season. There are no apricots in the Hilgers orchard this year. From some four hundred trees there won't be over one hundred pounds. (Oroville)—The late rains have come in good time and insure bountiful crops. Hay promises to be abundant and very cheap. The fruit trees are irrigated so thoroughly that they will do finely and thus the whole section is made more certain of all kinds of crops. (Honeycut)—The past week has been just perfect weather for the crops. (Palermo)—The last week has been the best this season. (Durham)—Crops of all kinds are making satisfactory growth. Fruit promises to be plentiful, with the exception of apricots.

GLENN (Fruit)—Quite a hail storm passed over this section, doing considerable damage to fruit and growing crops. The

weather has been perfect the past week for growing, and grain has made a wonderful growth and promises an abundant yield.

COLUSA (Colusa)—The north wind for the past four days has been injurious to grain, especially late winter sowing. All grain along the river would be greatly benefited by an inch of rain. (Grand Island)—Weather for the last week has been favorable for the late sown grain. Alfalfa is doing well. Plowing in the overplowed land still continues as the water goes down.

SUTTER (Yuba City)—All the grain is looking well and the spring showers and cool weather is just what is needed. About all the surface water has disappeared from the land in this county and many farmers have replanted their fields to corn or barley.

YUBA (Wheatland)—The acreage in grain is comparatively small, but with favorable weather the yield will probably be near an average. North winds are rapidly drying up the surface and a good rain would be of great benefit.

YOLO (Grafton)—Many acres of potatoes are likely to be planted on land now covered by water, if it recedes soon enough. (Blacks)—There is no longer any doubt that the grape crop is over the danger line. If the farmers of northern Yolo do not raise fine crops this year, all signs will fail. (Winters)—Our fruit and vegetable growers have been setting out canteloupe plants in great quantities this week. They are a little late but had to hold back on account of the late frosts. (Davisville)—The winds for the week have been very drying. No damage as yet to grain or fruit crops.

SACRAMENTO (Walnut Grove)—The prospects of an immense crop of fruit, grain and vegetables along both sides of the river this season is very good. (Sacramento)—Grain and hay men are wishing for a little rain. Fruit will not be a heavy crop. Pears are badly mildewed in some localities. (Union House)—Wheat is looking fine, late sown grain particularly. Barley is in need of rain. Strawberries are ripening fast. (Elk Grove)—Grain crop growing steadily; fruit also. No winds to do any damage. Berries growing and ripening well. (Clay)—Lovely weather this week and all grain growing fine. I never saw such growth of natural grass as covers every inch of ground.

SOLANO (Binghamton)—The frost has destroyed the first crop of strawberries, but the second promises to be unusually large. (Fremont)—There will be considerable more hay than usual made here this season, as the result of the early rains of last fall sprouting the scattered grain on the ground before the hogs and other cattle could find it. (Dixon)—The weather for the past two weeks has been all that could be desired for the growing grain. The outlook for a large grain crop is good and despite the continued low prices the farmers seem quite cheerful and hopeful. (Batavia)—Weather all that could be desired for growing crops. Barley is headed and promises a good yield. A good gentle rain would be a great benefit to late sown grain, but a heavy rain would be the means of lodging a great deal of grain, as the summer fallow is very rank. All crops are looking well. (Rio Vista)—Weather generally favorable. Crops suffering somewhat for rain.

## The Coast Districts.

HUMBOLDT (Eureka)—Crop prospects very good. MENDOCINO (Ukiah)—Late-sown grain is growing very rapidly, and with half an inch more rain will yield splendidly. We have had neither drouth, rain nor north wind to hurt. Fruit badly thinned by frost, but apples, pears and plums will be abundant. Prunes moderate and peaches thin. Alfalfa ready to cut and heavy. Early barley heading.

SAN BENITO (La Canada)—Some grain is suffering. A large crop of hay is already assured. Sheep shearing will be finished in a couple of weeks. Some are cutting wild hay, which is heavy. (Hollister)—Have never seen a more favorable outlook for grain and hay.

SAN LUIS OBISPO (Paso Robles)—Grain is still looking well, but rain is needed. We have had three lowland fogs, and this with cool weather is helping us much. Grain will be comparatively short in yield on the east side of Salinas river. Plums, prunes and cherries are for the most part out of bloom and setting fruit with the promise of a full crop. (Santa Margarita)—Crops are looking very favorable, and large yield is predicted. (Templeton)—Fruit prospects are unusually good.

## Foothill Region.

INYO (Independence)—All fruit, berries and vegetables now doing finely. Light rain would help matters now.

MARIPOSA (Mariposa)—Condition of grain crop is fair. Strawberries are beginning to ripen.

CALAVERAS (San Andreas)—The season was never better for crops. (Milton)—Weather favorable for all crops.

EL DORADO (Lotus)—The late frosts have done much damage to the peach crop here and in Coloma, and it is not likely there will be more than a third of a crop.

PLACER (Rocklin)—Grain and hay looking fine. Oats and barley heading out. (Newcastle)—Fruit generally promises a good crop. Cherries scarcely half a crop, though what there are will be larger in size. (Roseville)—Early-sown barley heading out; a little alfalfa out. Hay, grain and fruit is all that could be wished for.

NEVADA (Chicago Park)—Crop prospects at this writing are good. If we have no more frosts yield will be big.

SISKIYOU (Yreka)—Spring cold and backward. Winter wheat looking fairly well, but too cold for rapid growth. (Ager)—Grain looking well. Rain would be acceptable.

## Sonoma Valley.

SONOMA (Santa Rosa)—Prunes have set heavy on the trees, and the outlook for a heavy crop was never better. The peach crop is an average, and the pear crop will be very light. They seem to have been blighted in the blossom. (Sabastopol)—Medium crop Crawford; few Clings; Muirs plentiful. Prunes reported dropping considerably. Vines coming on fairly; season as a whole rather backward, as shown by flowers, roses, etc. (Forestville)—The week has been very favorable to growing grain. The pear crop will be large. Early corn coming up. Land is being broken for field corn and potatoes. Grapes seem to be all right. Alfalfa is making a fine growth and will be ready for mowing in two or three weeks. Late seeding on the overflow lands is about finished.

## Napa Valley.

NAPA (Napa)—All crops doing well. Grain, etc., need rain; the ground is getting quite dry. Grass and grain of all kinds are growing rapidly. Corn-planting time has arrived. A considerable acreage in the vicinity of town has already been planted.

## Southern California.

LOS ANGELES (Los Angeles)—New hay is coming to market. ORANGE (Tustin)—Prospect continues good for grain and feed crops, as well as for honey and prunes.

RIVERSIDE (San Jacinto)—Rain is much needed to develop the grain. A very light frost on morning of 15th; no damage. Large crop of deciduous fruit. Many new orchards just coming into bearing.

SAN DIEGO (Chollar Valley)—Haying has begun. Quantity per acre not large, but of good quality. (National City)—The condition of the hay crop varies considerably with locality. Some portions need more rain to make the hay stand up as it should.

SANTA BARBARA (Los Alamos)—Dry north winds been prevailing the past week. Crops are looking well, although more rain is badly needed in certain localities. A splendid hay crop is assured.

VENTURA (Fremontville)—On the 15th a frost injured the

grape vines. Barley is rapidly maturing and haying has begun. Fruit is growing rapidly. (Santa Paula)—Weather favorable for growing of crops. Apricot crop light. (Saticoy)—Haying will begin about May 1st. Fruit prospects are fair. Heavy fogs of great benefit to late-sown barley.

## Santa Clara Valley.

ALAMEDA (Niles)—Barley throughout the valley is attacked by the grain aphid, which has done much damage to the young crop. Apricots are set very thinly; estimated at less than half a crop. Cherries are injured to some extent. (San Leandro)—Apricots not up to the average. Cherries look well and will be ripe in about three weeks. Rhubarb is plentiful, but too cheap to pick. Pea picking commenced this week in earnest. Grain looks well. All garden truck is doing well. The weather has been quite favorable. The late frosts damaged some potatoes in exposed parts.

SANTA CLARA (San Jose)—Some think the prune crop will not be as large as anticipated. Too early to tell what part will drop. The canker worm is making it interesting for those who did not keep the bands well inked.

## The Bean Business.

There is so much interest in California at present in the bean crop that a review of the product from an Eastern point of view will be welcome. A New York City writer for the *Country Gentleman* argues that with the present unremunerative prices for wheat and some other farm crops, it is a wonder that more farmers do not grow beans. A large area of land in different parts of the country is suited to the crop. It is believed by some that land too poor for any other use is just the thing for beans. But while they will perhaps make a fair crop on thin land on which other crops would fail, good soil is appreciated by them. They will not usually do well on black, mucky or wet land, as such induces too much of a growth of vines. But good wheat land should produce good beans.

Where the crop is grown on a large scale so that machinery can be largely used, the cost of growing should not be materially greater than that of growing an equal area of wheat. They may be planted by machinery, harvested by machinery, threshed by machinery, and the large buyers in bean-growing districts use machinery largely in picking over the product. The yield will probably, on the average, equal that of wheat. Then look at the price per bushel compared with that of wheat. The straw, too, is a valuable food for sheep, as well as for other live stock, far exceeding wheat-straw in this respect.

Bean prices, usually high, are likely to be higher this year. The domestic demand always exceeds the home-grown supply, and large quantities are annually imported. It is not creditable to the farmers of this country that these large importations are permitted to continue. The wholesale prices of these foreign beans are usually about ten per cent less than those of our native-grown beans of the same varieties. Besides this, the former must pay duty of twenty per cent ad valorem. So it would seem that American farmers ought to be able to compete successfully with the imported article. To be sure we export some—largely Red Kidneys—but the imports are far in excess of the exports.

The imports come mostly from Europe, perhaps most largely from Hungary, and some from France. The varieties are Medium and Pea. Statistics show that the importations at the ports of New York, Boston and Philadelphia for the crop year of 1892-93 were 211,016 bags of 200 pounds each; for 1893-4, still larger—244,776 bags. But this year's imports are not likely to be so large, for the foreign bean-growing countries were also the victims of drouth last summer, and the crop was materially shortened thereby. Some authorities estimate the shortage in Hungary at sixty to seventy-five per cent. This may be a little high, but from the quantities so far received, those in transit and the visible supply, it is evident that the crop is very short. Holders seem to be of this opinion, as the market is very firm and prices are advancing.

The domestic crop is also short, and receipts in leading markets are much below those of last year. Good authorities report the Canadian stock as nearly exhausted and leading dealers' supplies very short. California's supply is also short, and stock of good quality is reported to be extremely scarce. Receipts in the New York market so far this year are much below those of last year, while the exports are only about half those for the same time a year ago. Taken altogether, the outlook for the bean crop, so far as prices and demand are concerned, is good.

California Limas cut quite a figure in the Eastern markets. The crop of these last year was a poor one, and present supplies are very moderate, while prices are correspondingly high. They are now selling at prices about double those of a year ago. Added to this is the fact that holders are not at all anxious to sell, even at the prevailing high prices. It is pretty certain that the next crop will meet a profitable market.

As to the best varieties to grow for market, the market reports show quickly which bring the highest prices. The Marrows and White Kidneys sell for the most money per bushel now, and Red Kidneys are not much behind. Other considerations being equal, it would be easy to determine which is the most profitable variety. But some kinds do not succeed so well as others in certain soils and locations, and a trial is the only sure method of determining just what varieties will pay best.



# HORTICULTURE.

## The Date Palm.

TO THE EDITOR:—The following letter has been forwarded to me by the Secretary of Agriculture. It is in answer to a suggestion of mine that an importation of date palm suckers of valuable fruiting varieties, for experimental planting in favorable locations, would be useful.

In southern California, date palms were introduced by the Mission fathers and have since been extensively planted for ornamental purposes. Most often trees were raised from seed. The sucker-raised palm bears the same relation to the seedling that the navel or blood orange does to the seedling orange. Indeed, the comparative value of the sucker to the seedling date is greater than that of the budded to the seedling fruits of any other tree.

Good dates have been raised in both central and southern California. I have not yet seen any, however, that could stand against the ordinary Egyptian fruit. The date is a most prolific producer when properly treated and favorably situated.

It will stand unlimited sun heat and considerably more frost than the orange, but to do well it must have ample water. According to an Arab saying, the proper situation of a date tree is to have its feet in the water and its head in the fire.

In dates the sexes are separated and each one is confined to a single tree. It is necessary to have at least one male tree in every bearing grove. The female trees in Egypt are artificially fertilized. I have frequently watched the Fellahs on the Nile climbing the tall palm trees and leaving a spray of the male flowers in each female tree.

As a food the date is nutritious and agreeable. When dried it is portable in condensed volume and keeps well. It has always seemed to me that the date would form an economical element in the ration of the sailor.

The ideal location in America for the date is the Colorado desert where water is either near the surface or obtainable from irrigation.

On the borders of this desert we already have the tall native palm, bearing a fruit used by the natives. The fact that the *Washingtonia filifera*, although growing vigorously throughout the southern California coast counties, does not bear fruit, or very rarely so, is probably an indication that there is insufficient heat for good fruit from any date in our mild summers.

I have grown date trees for many years in the San Gabriel valley and had them fruit, but the fruiting is light and scarcely edible. The trees were from seed and about half have turned out to be males.

I was unaware of the Government importation of suckers from fine varieties. Believing that the knowledge will be of interest to the public, I present the facts, as officially sent me, through your extensively circulated journal. ABBOT KINNEY.

Lamanda Park, April 4th, 1895.

As our readers know, Mr. Kinney is exceptionally well informed upon trees and economic plants generally in near and distant parts, and it is singular that he should have overlooked the frequent allusions made in the *RURAL PRESS* to the introduction of these named varieties of date palms from the date regions of Asia and Africa. Aside from our references to the plants, the Reports of the University Experiment Station make full account of their planting at the stations at Tulare and Pomona. However, we are glad Mr. Kinney has to be enlightened upon this subject, for it is timely to refresh the public mind on this important effort at acclimation. The palms at Tulare and Pomona are growing well, though still small. One of the female trees at Tulare promises to bloom this year. The plants are also making offsets, which will be rooted as far as possible. This is the only way a variety can be multiplied, as the seedlings, as Mr. Kinney remarks, are prone to reversion. This fact makes multiplication of choice varieties, very slow.

The introduction of these date palms from abroad was accomplished under direction of Prof. H. E. Vandeman, formerly pomologist of the Department of Agriculture at Washington. The record of their distribution, which we publish below, is by the present chief of the Division of Pomology. We give the letter in detail so that our readers, when opportunity offers, may visit the plantations nearest to them:

MEMORANDUM ON DATE (*Phoenix dactylifera*) TREES IMPORTED BY U. S. DEPT. OF AGRICULTURE, IN 1890-91.

The Department of Agriculture (Division of Pomology) imported from Cairo, Egypt, in 1890, rooted suckers of twelve named varieties of the date and also a number of rooted suckers taken from male (staminate) date trees.

In the same year an importation consisting of three named varieties of the date was received from Biskra, Algeria.

In 1891 an importation of rooted suckers of one variety was received from Muscat, Arabia.

The plants in these three importations were sent to Las Cruces, New Mexico; Phoenix and Yuma, Arizona; National City, Pomona, Tulare and Indio, California; several named varieties and one male tree being sent to each place. The names of the varieties imported and the locations to which they were sent by the Department are as follows:

To H. W. Blaisdell, Yuma, Arizona, and the San Joaquin Valley Station of the Agricultural Experiment Station of the University of California at Tulare, California, the following varieties, a total of thirteen trees, including one male tree to each place:

*Egyptian*—Amhat, Nakleh-el-Pasha, Seewah, Hazenah, Zeb-el-Aled, Sultaneh, Amreeyeh, Rasheedeh.

*Algerian*—Deglet Nour, Rars, M'Kentichi-Degla.

*Arabian*—Fard.

To the Agricultural Station of New Mexico at Las Cruces, N. M., all the above varieties except the Arabian variety named Fard.

To the Substation of Agricultural Experiment Station of the University of Arizona, Phoenix, Arizona; F. A. Kimball, National City, California, and southern California Station of the Agricultural Experiment Station of the University of California at Pomona, California, ten trees, including one male, were sent to each:

*Egyptian*—Amhat, Nakleh-el-Pasha, Seewah, Hazenah, Zeb-el-Aled, Sultaneh, Amreeyeh, Rasheedeh.

*Arabian*—Fard.

To the Southern Pacific R. R. Co., for planting at Indio, California, besides one male tree, six named varieties, viz:

*Egyptian*—Amreeyeh, Hazenah, Seewah, Rasheedeh.

*Arabian*—Fard.

## RECAPITULATION.

| Planted at—                | Trees of Named Varieties. | Male. |
|----------------------------|---------------------------|-------|
| Las Cruces, N. M.          | 11                        | 1     |
| Phoenix, Arizona.          | 11                        | 1     |
| Yuma, Arizona.             | 12                        | 1     |
| National City, California. | 9                         | 1     |
| Pomona, California.        | 9                         | 1     |
| Tulare, California.        | 12                        | 1     |
| Indio, California.         | 5                         | 1     |
| Total.                     | 67                        | 7     |

Total number of trees, 74. S. B. HEIGES, Pomologist.

## Strawberries in Riverside.

We recently had an account of strawberry growing at Azusa, one of the chief producing regions in southern California. Farther in the interior, and in a climate less affected by coast influences, is Riverside. At the East Side Club, in that region, a paper was read last week by R. Hurlburt, from which the following is taken:

The "Monarch of the West," so well named, is in the East nearly worthless, being a shy bearer. It attains a place in California second to none for all purposes, and bears almost continuously.

The Sharpless, which in the East needed the most adobe soil, is in its element here. It is a sweeter, more Alpine in shape, and a more tender berry. It is very sensitive in its nature. It will defeat you in bearing if you do not listen to its sensitive call.

Set a straight row, for horse culture, if possible, and for irrigating about two and one-half feet apart by one foot in the row. The double row is very good with plants—one on each six inches square. Don't crowd them. Give every plant room for all the light and water and root room for an independent existence. The plant is to be set even with the surface, for the tendency is to grow higher up, making a ridge which quickly dries out.

How shall we irrigate? This fruit likes water; it must have water. But there is a distinct limit, and one in love with the fruit will hear the cry and know when to give an irrigation and when to withhold water. Here is the greatest danger of failure. An irrigation only once in fifteen days would utterly destroy our crop. We would have to give too great an amount of water, which would be as detrimental as too little. The processes of feeding and the assimilation in plant and animal life are identical. It is equally necessary to withhold as to feed for success. The fruit culturist must know, equally with other departments of husbandry, the real needs of the stock he handles. To let the strawberry wilt is to nearly destroy the crop. I have, in these irrigation fields, reached the conclusion that a short run and a full run once in eight days, giving every other row a run, alternating so as to give the right condition of soil for picking purposes, is the best method. It will give a cool soil in this climate so as to prevent wilting or burning of the plants or fruit. Of course, variations must be made to suit the variations in heat and moisture of the atmosphere. To gain the best success the water must be under the control of the grower, for he alone can know what is needed. I have found myself hampered and damaged to a large extent by being obliged to let other minds, who have no interest, turn on or withhold water at their option, which is absolutely uncalled for.

You ask: Are there no pests? Yes; in California almost equal to the frost or the drouth in the East. I'll not say a word about the small boy, for he doesn't love strawberries (?). The birds do. Some say a bee cannot eat fruit without a bird to enter his protest first. Perhaps so. I do not believe it. I fed swarms of my neighbor's bees last year. They went underneath the leaves where the bird could or would not go. One-quarter of my crop last year was destroyed by these pests. There seems to be no lady-bird nor wash nor an official paid by the county to abate these nuisances.

About marketing. Of course you who have a small patch will find your marketing already done; but to you who have a large crop to market, I would

say do not deliver to anybody to sell for you on commission. I have known over and over the dishonest commission man to order more than his market could hold, so as to feed himself and his friends and customers with cheap berries at the grower's expense. One who sells to a commission man will find, in the long run, that he will lose all confidence in men, which will be to him as great a damage as the loss of his fruit. Do a square business, and know what you are to get before you ship.

A home market is the best. I sold at home 300 quarts per day at ten cents, while berries picked ten miles away the day before sold at eight cents. There is more difference in the quality of the ripe, luscious fruit and fruit that is not ripe and luscious than there is between cull boards and clear stuff lumber. Do not sell in a dirty old box, but have everything the newest and the cleanest; and above all things, give full measure with equal quality of berries on the top and on the bottom. Put your name on your packages as if you were not ashamed of your fruit. Do not top your boxes with fruit turned for show, for a pure white glove may hide a filthy hand.

## Selecting Buds from Good Stock.

Unquestionably insufficient attention is paid to the selection of buds for propagation from trees bearing the best specimens of the variety desired. Merely to take buds from any tree of the name desired is not good horticulture. Every nurseryman should be sure that he uses only buds from trees whose fruit is true to the type as well as to the name. No doubt much deterioration is due to multiplication of inferior forms. R. D. Barber, of Riverside, gives some observations made by him during his service as superintendent of the Queen Colony Fruit Association last year. He says there is a very great difference in the quality of the oranges of the same variety grown in the different orchards at South Riverside. This is especially true of the Washington navel oranges. Some will grade a large per cent more fancy fruit than others. This makes a great difference in the income of the orchard. The explanation of this difference he believes to be the difference in the purity and strain of the buds used. Nurserymen have been careless in this respect, and growers have bought anything called Riverside Washington navels.

Mr. Barber claims that the nearer the original Riverside tree we get the better the fruit, and every dilution of this original strain deteriorates the fruit, although he thinks this might be obviated in a measure by selecting buds from bearing trees that mature smooth, thin-skinned fruit. He would not bud a tree from buds taken from non-bearing trees for fear of propagating the defects of the fruit. Nature's laws govern in the tree world as they do in the animal, and we would not expect to get a blooded colt from a broncho sire and dam. The fruit from the old original Riverside Washington naval orchard at Riverside, the Barney orchard, always commands the highest price in the market, and was sold this year on the trees for \$10,000.

## THE POULTRY YARD.

### Chickens in the Orchard.

We have had frequent prescriptions of the wisdom of combining poultry and fruit interests on small farms. The same line of thought was followed by F. T. Lindenberger in his paper recently read at the Farmers' Institute at Perris, Riverside county, and he presented the matter very wisely and conservatively. Poultry and fruit-raising do well together, as the industrious hen loves to hunt for insects in the cultivated orchard and take dust baths in the mellow soil. She will play havoc with the tender foliage of young trees, however, unless provided with plenty of green feed. A small plot convenient to irrigating water and seeded to alfalfa will supply an enormous amount of the best of green food, and save the trees from her foraging instincts. The shade of orchard trees is grateful to the chickens, but fruit trees should never be allowed to become a roosting-place for fowls. It is not best for the fowl; it is highly injurious to the tree, and it has a tendency to spoil one's appetite for the fruit. Small houses capable of sheltering fifteen to twenty chickens can be built at an expense of about \$2 for the material. The sides of the building should be hung on hinges so they can be raised like wings during the day, making a well-ventilated and shady place for the fowls. At night close down the wings and shut the house tight, as open houses are not suitable for chickens. They need warm quarters, free from draft at night, as much as they need open and shady runs in the day. These houses need no floors, and they should be frequently moved and the droppings cultivated into the soil. The buildings should be frequently treated to a liberal coating of whitewash. By tipping the



building on its side and using a spray pump, this work can be easily and cheaply accomplished.

In speaking of poultry-raising in this vicinity, I have mentioned chickens only. The Pekin duck thrives well here, and the only water needed is an abundance to drink. At nine weeks old a duck can be made to weigh four or five pounds, and it makes a delicious roast. But there being no certain market on this coast for ducks, they are unprofitable except for home use. They are voracious feeders, and if kept beyond the period mentioned they consume in food more than their value.

As to turkeys the climate suits them admirably, and they quickly adapt themselves to their surroundings, providing the surroundings are large enough. The leaves and fruit from the trees are good for the turkey, but you will speedily conclude that the turkey is not contributing to the successful growth and fruiting of the trees and vines. It is cheaper to pay Thanksgiving prices for turkey than to feed the rangy fowl upon such expensive food. The big grain ranch, with unlimited space and fleet horses to herd large flocks on the stubblefields, should enjoy the monopoly of the turkey raising business.

Small flocks of chickens, well housed and fed, are profitable. Increase the flock and the profit ceases. I would place the limit at fifty hens, unless a business is made of poultry-raising. In most cases a flock of twenty will bring greater net returns than a flock of fifty.

With the incubator and brooder chickens can be successfully and profitably reared, but not one person in a hundred is adapted to the work or will make it pay. A good incubator and a place to keep it, where the temperature varies but little day or night, will hatch a fair percentage of vigorous chicks, but the successful rearing of these chicks is quite another matter. To raise chickens artificially and make the business profitable requires good judgment, unlimited patience, dogged perseverance, untiring industry and close attention to every detail. The temperature of the brooders must be carefully regulated. If too hot, the chickens are affected with leg weakness and bowels trouble; if too cold, they crowd and smother one another to death. The brooders must be scrupulously cleaned daily, and pure, fresh water kept before the chicks at all times. The food must be dry; sloppy food is usually fatal. The business can be made profitable, but I would not recommend a person to go extensively into the artificial rearing of chicks who has made a failure of every other occupation attempted.

## THE SWINE YARD.

### How To Keep Hogs Healthy.

In the upper San Joaquin valley there has been much complaint of swine diseases of late and naturally the subject came up prominently at the recent Farmers' Institute at Tulare. The discussion was opened with a paper by H. K. Ayer, who gave his experience in the care of hogs and more particularly for the prevention of disease. He said: My neighbors on every side have lost hogs in the last fifteen months, some 100 and upwards, others in less numbers, from what they claim to be pneumonia or lung trouble, and I believe those in other parts of this district who have lost hogs, claim lung trouble to be the cause. My remedy for the prevention of disease is simply hardwood ashes and charcoal from wood. Ashes in water form a lye that will cleanse the stomach and bowels, and neutralize any gas that may accumulate from eating heavy green food, such as alfalfa. I am informed by good authority that a light solution of lyewater will certainly kill the germ that produces trichinosis, that dread disease which is so well known in this country. Ashes are known to be a good disinfectant and should be used very liberally indeed about the pens or in stagnant pools, for, in my opinion, such pools are the breeding places of most disease germs.

Charcoal taken into the stomach will absorb mucous or any parasite that may exist, and at the same time act as an antiseptic, it is cooling and soothing to any inflamed membrane, purifies the blood, and keeps the system in a healthy condition. As to quantity, I would advise one quart of ashes to 200 gallons of water. At the end of two weeks clean the trough and start anew. All hogs, old and young, should have free access to a pile of ashes, this being a sure cure for sore eyes especially—a trouble about which many complaints have been made. Ashes should, at least once each week, be put in the beds where hogs sleep, and, by carefully following this rule, you will have very few if any hog lice to contend with.

I use charcoal gathered from lots where buildings have been burned, and find one sack per week sufficient for fifty hogs, old and young. The cost of the ashes and charcoal is in the hauling from the city and in the additional expense of sacking the charcoal, which does not exceed eight cents per sack, with the sack to use again. I feed a small quantity of salt to hogs, as well as to other stock.

The above-mentioned remedies—ashes and char-

coal—with the use of salt, as stated, are the only ones used by me for the prevention of disease.

As to the cure of the diseases of the hog I must here state that I know little or nothing, not having had a sick hog or pig in my three years' experience in the business. As to the raising of pigs I claim that when young they are not strong enough to assimilate the milk made from heavy alfalfa, consequently indigestion causes irritation of the mucous membrane and they will die. In my experience to raise healthy, thrifty pigs the milk should be made from dry feed for at least three weeks from birth.

*Discussion.*—Mr. Elias Gallup, of Hanford, who has had much success in raising hogs, stated that if one of his hogs was found to be ill his first care was to isolate it completely, and, if very sick, to kill it. He attributed the present epidemic among hogs to carelessness, but would recommend the liberal use of wood ashes, sulphur and charcoal.

## THE DAIRY.

### Dairy Industry of California.

Read by D. DUNKEE before the Farmers Institute at Riverside.

There are few who realize the magnitude of the dairy industry of California, and fewer still are they who realize the magnitude of the fraud that has obtained such a strong hold in this State upon this honest and honorable industry by that imitation article known as oleomargarine. This compound, the basis of all frauds in butter, is the outcome of an ingenious Frenchman's notion, that the butter diffused through the milk of the cow is due to the absorption of the animal's fat. Taking some minced beef suet, a few fresh sheep stomachs cut into small pieces, a little carbonate of potash and water, this Frenchman subjected the mixture to a heat of 113°, and so by the action of the pepsin in the sheep stomachs, separated the fats from the other tissues. By hydraulic pressure the fat was again separated into stearine and margarine, and putting ten pounds of the latter into a churn with four pints of milk, three pints of water, and a little annatto, the gentleman succeeded in turning out a compound sufficiently like butter to pass for that article, its only lack being the genuine color that characterizes all good butter. Whether he produced a deleterious stuff containing germs of disease and all manner of loathsome parasites, as one set of scientific experts pronounced, or something far more wholesome than half the butter in the market, as another set declared, was of little moment to the discoverer, so long as the thing was likely to prove profitable. He patented his process and found no difficulty in selling the rights to handle it in France, England, Holland, Germany and America.

Professor Waller, Professor Love and Professor Stillwell, of the New York Produce Exchange, all of whom are chemists of the highest standing, have made sworn statements to the fact of having found in samples of oleo delivered to them, paraffine in quantities ranging from five to twelve per cent. There is no known alkali or acid that will dissolve paraffine, hence its dangerous quality as an article of food. And right here I want to say to you that while a dairy committee of investigation was recently doing duty by appointment of the Southern California Dairy Association, that in every town or locality of any size or importance in southern California, they found oleo fully as prominent and as much in use as the genuine article. More particularly is it a fact that nearly all hotels and restaurants use nothing else in the way of supplying their customers' butter wants.

Beautiful Riverside, always abreast with the times, is fully to the front with her sister towns in the way of consumption of this fraudulent compound.

If oleo has so much merit, why not introduce it in its own natural color? Then if people wanted it they would know it when they saw it.

Prohibiting the manufacturing of oleo is out of the question; the only alternative left is to follow the example set by other States, in having laws that forbid its being made in imitation or semblance of butter. In oleo the necessary intent and result of coloring it, as at present, is to deceive and injure consumers, as well as the makers of genuine butter. In addition to a bill regulating the manufacture and sale of oleo, it may be found necessary, in order to protect public health in other directions, to pass a law against the sale of impure, unwholesome and adulterated milk.

Our export trade in butter has been ruined by prejudice created against our product in the foreign markets of the world. No State in this glorious Union is so well endowed by the gift of nature for easy and cheap dairying as California, the climatic conditions being such that we do not need costly, expensive buildings as in the Eastern States; our cows do not contend with severe winters. By irrigation we produce from two to five times as much feed per acre, and yet with all these natural advantages, unless oleo is kept from our markets the dairyman is just as sure to go to the wall as the sun is to rise on the morrow. How can it be otherwise? California has \$33,000,000 invested in dairying.

The makers of oleo contend that their product is

as wholesome as butter. This is not true, and in the nature of things cannot be true. Butter melts in the stomach at 90° and passes readily into pancreatic emulsion and digestion. As will be seen, this is a point below the normal heat of the human body. And there is no gastric or nervous strain to expel it from the stomach, for it is a substance designed by nature for food in its own unchanged state. Oleo melts at from 105° to 106°. Therefore the heat of the human body is not sufficient to emulsify it, and it remains a dead inert substance, causing severe nervous tension of a forced gastric action to expel it from the stomach. Chemists hold that it takes 212° Fahrenheit to destroy the disease and germs of animal matter. It is reasonable to suppose then that when fats of diseased animals are used and submitted to a heat of 120° or less that the germs still live.

To give you some idea of the immense amount of capital invested in dairying I will state that in the United States there are 18,000,000 cows. Putting the average product per cow at \$40 we have the enormous sum of \$720,000,000. The permanent amount invested in these cows and all fixtures that go with the dairying business would be as much more.

There are 5,000,000 people in the United States that directly or indirectly gain a living by this great industry.

Let us reason from another point. Who pays the taxes? The dairymen pay on more than \$700,000,000. The margarine maker pays nothing, for he is simply assessed on his slaughter and packing house. This making of bogus butter was the greatest boon that ever came to the packing house, for it works up a refuse which would otherwise have gone to waste.

The value of dairy products sold in this State in 1894 was \$7,000,000. The Internal Revenue reports show, sold in the United States in 1894, 168,000,000 pounds at twenty-five cents, the average price of butter, amounting to \$42,000,000. Think of that much money being taken from the many and turned into the pockets of a few corporations.

In conclusion I want to say, that if we can have laws that will compel the oleo people to sell their product for exactly what it is, as the dairyman does, we stand ready to meet and defy all such competition, and when we shall have the desired protection a most wonderful change will be seen in this grand county of Riverside. The dairy and cheese factory will be running full blast on every hand, and Riverside will not only be the banner county for oranges, but one of the banner counties in dairying. We have the soil, the water, the brains, the capital and the enterprise, but we want a market, and we want that market to be free from fraudulent competition.

### The Dairy in Mixed Farming.

The last few years have convinced many of the truth of these words recently spoken by F. T. Lindemberger at a Farmers' Institute in southern California: "Diversified farming is recognized as being far the safest proposition for those who make their living from the soil. I believe combined fruit, poultry, dairy and hog farming to be a sensible combination for this locality. The horticulturist who has a flock of carefully selected hens, a few cows and pigs, and raises the food for them on his place, returning all fertilizing material to the soil, has safely cast his anchor to windward, and can feel secure in a regular income and a life of comfort and contentment. The greatest danger in any or all of these propositions is in attempting too much."

After speaking of the value of poultry on a fruit ranch, Mr. Lindemberger paid a tribute of loyalty to the dairy cow. She has five uses of commercial value—milk, butter, cheese, fertilizer, and the calf for meat. Exhaust all of these and you still have the cow. She will always do the best she can under any circumstances. Given poor care and indifferent food, she will produce milk and butter until her system is exhausted. Well treated and liberally fed, she quickly responds with a liberal supply of lacteal fluid. I do not wish to be understood as recommending every cow that gives milk as a profitable cow. We are feeding too many that should have long since been turned over to the butcher, as a cow that will not produce 300 pounds of butter in a year is not worth the treatment that a good cow should receive. But as a family provider, a constant source of income and a mortgage lifter, a good cow comes the nearest being the best friend of man of the domestic animals.

The modern creamery is bringing about a desirable change in the dairy business, taking the drudgery from the home, producing more and better butter and obtaining the highest price for the product.

The best all-round feed for cows is alfalfa, both in the green and cured state. This should be supplemented by corn fodder, beets, pumpkins and pie melons, which can be successfully grown between the rows of young trees. Ground grain, shorts and bran can be profitably used to a limited extent.

Raising hogs is profitable to the extent that feed can be cheaply grown for them on your place. The danger in this industry is allowing your porkers to increase beyond the limits of the cheap food supply.



The skimmed milk from the dairy or factory, together with green or cured alfalfa, beets, pumpkins, cabbage, etc., will keep the hogs growing finely until the fattening period, when six weeks of grain feeding should put them in prime condition for the market.

## THE APIARY.

### California Bee-Keeping.

At the recent Farmers' Institute at Perris, Riverside county, Mr. B. S. Taylor read a paper on the needs and prospects of bee-keeping in California which contained some wholesome criticisms and much encouraging talk about the local conditions for profitable apiculture. He said:

It is well known that southern California has a vast amount of territory that is but very little value except as pasture for bees, and in good season the honey flower is practically unlimited. And while the field is now pretty well occupied, yet I think there is plenty of room for those who will give their careful, thoughtful, earnest attention to the business. But we have altogether too many careless, thoughtless, unskilled persons in the business already. In fact, men and women totally ignorant of the first principles of apiculture engage in it entirely unconscious of the folly of such a course.

*Fuller Knowledge Needed.*—It is really surprising to see how little knowledge a great many of our bee-keepers have of the business in which they are engaged. Not long since I purchased seventy-five colonies of bees from quite a noted bee man, who had several years' experience, and I understand made some money from them. But every one of those hives had one frame less than they should have had. And I have been asked a great many times within the past six weeks how I managed to put in so much time in my apiary, but those of you who have had any experience in that line will not ask that question. Another lot that I bought from a man who had handled bees for fifteen years at least, not only lacked one frame to the hive, but there was a space of nearly one inch between the bottom of the frames and the bottom board of the hive, and of course said space was filled up with comb to such an extent that it was almost impossible to get the frames out of the hives. I drove several miles one day not long ago to look at some bees with the intention of buying. I was told they were in fine shape, that the bee inspector had been there and examined them and pronounced them in a No. 1 condition, and I did expect, from the description I had of them, to see a model apiary. But imagine my surprise on lifting the cover from the first hive to see the comb in those moveable frames all built crosswise, and the next one the same, the frames one-half inch to one and a-half inches apart, and not a frame with a straight comb in the whole apiary. Now this is all wrong. No one should think of becoming an apiarist without having a proper knowledge of the business. Nine out of ten of those who handle their bees in this condition will be equally unwise in the way in which they dispose of their honey. They will likely put it up in cheap cans and cases, no labels on them, the good and poor honey all mixed together and sell for whatever the dealer has a mind to pay. And such men are usually the first to sell, thereby establishing a price for the season, as a general thing, for all or nearly all the honey sold in that locality.

*Marketing.*—I believe, as a rule, it is more difficult to dispose of our honey to the best advantage than to produce it, and right here is where the majority of us are too negligent. The failure to properly prepare and market our products is one of the greatest detriments to our business. The merchant will invariably tell us that the appearance of an article has everything to do with the sale of it. We must put up our honey in attractive packages, neat, clean, grading it with care, never under any circumstances claiming that the grade is any better than it is. We should have our complete address, as well as the name of our apiary upon each package, that the purchaser may know who the producer is and where he may be found.

I am informed that that much dreaded disease, foul brood, exists throughout some portions of our county to an alarming extent, and that there were certain apiaries where they had lost heavily from this cause, and yet the owners of said apiaries paid but very little attention to it, even letting the combs which contained the dead brood lie promiscuously around the apiary, thereby exposing others to the infection and inviting a general spread of the disease. I don't know that we have any laws preventing such a one from keeping bees, but I certainly believe we ought to have. I am not very well posted in regard to the laws pertaining to foul brood, nor have I the time to discuss them here if I were; but it does seem to me that laws should not be necessary to compel those engaged in the bee business to do their very utmost to stamp out this wholesale destroyer of our pets. However, I should like to see a free and full discussion on this very important subject before the close of this meeting.

*Adulteration.*—It is a well known fact that our

honey is adulterated to a great extent by the dealers or middlemen, both in Los Angeles and San Francisco. I have been informed that one firm in San Francisco used in 1893 over one million pounds of glucose for this nefarious purpose. Now, I would not think so much of this, if the adulterated honey were sold for just what it is; but when it is put upon the market and sold for pure honey, as it is invariably is, I object to it, as I think every producer should. I find the dealers in our eastern markets are getting tired of handling this adulterated article, and some of them are now trying to perfect plans whereby they can purchase honey direct from the producer. I believe we should form a bee-keepers association for Riverside county for our own mutual benefit and protection. I believe we might handle all of our product through such an association by co-operating with the Los Angeles and State associations. We could then keep our products out of the hands of unscrupulous dealers, thus stopping the adulteration of our honey to a great extent, and thereby enhance its value. And then, too, we might save some of the large profits these middlemen make, for I notice they are not in the business for their health, as a great many of us bee-keepers are, but solely for the dollars they can and do make.

In conclusion I would say, let us strive to better our condition by educating ourselves in our loved pursuit, not only by our experience, but by a careful study of the best bee literature obtainable. Our best text books on bee-keeping are now sold at so low a price that any one who can afford to keep one colony of bees can certainly afford to have at least one of the books; and we should take at least one of the many good bee journals published. Let us endeavor to become masters of our business, not only in the care and handling of our apiaries, but also in the putting up and marketing of its products. Then the profits will take care of themselves.

## THE FIELD.

### Alfalfa Growing in Tulare County.

*J. B. Jordan, Visalia.*—For twenty years I have grown alfalfa on 160 acres of "plains" land—mixed clay, sand, and black soil; subsoil mostly yellow clay, with some hardpan. Water is found at from twelve to fifteen feet. In early summer the soil is dry from two to four feet. Plow deep for alfalfa, harrow, and cross harrow. We sow in this country the last of January (it then gets the benefit of spring rains); use fifteen to twenty pounds of seed per acre, harrow once after seeding, covering from one-fourth to one-half inch, and cut when knee high. If not too weedy for hay, cut from two to three times the first year. It yields from three to four tons per acre. The number of times irrigated depends on the season. Irrigate any time until within a few days of cutting. It requires more moisture the first year to give it root. After the first year we cut four or five times. It yields from one to two tons per acre, and sometimes more, owing to the moisture in the soil. Cut for hay when well in bloom, and for seed when a majority of pods are ripe. In this country we pasture from one to two months in the spring; then let it ripen for seed. The hay should be raked and stacked in three or four days, in stacks same as other hay. It will heat if not properly cured. The yield of seed is from four to sixteen bushels per acre; cost of thrashing, from 50 cents to \$1 per bushel. The common thrasher, with a different screen, is satisfactory. Prices for hay have ranged from \$7 to \$12 per ton, baled; seed from seven to twelve cents per pound. Alfalfa hay with a little grain gives very satisfactory results as food for farm animals. The green pasture is good for growing hogs; also satisfactory for sheep and horses. Some cattle will bloat when fed on alfalfa alone. To prevent, keep them supplied with grass, straw, or hay. Alfalfa will do better without irrigation where there is sufficient moisture and porous soil. The straw is worth about one-half as much as the hay cut in bloom. The second year it will attain its best yields.

*R. E. Hyde, Visalia.*—I have had about fifteen years' experience, mostly on sand or loam soil. Water is found at twenty feet; damp soil is encountered five feet from the surface. Plow and pulverize well; sow, in February or March, twenty pounds per acre; harrow or brush lightly, then roll. Cut as soon as tall enough, then irrigate. Winter never kills it here; only lack of moisture kills it. We irrigate after each cutting; six inches is not too much in light soil. Water is obtained from streams. More water is needed the first than later years. After the first year we cut from three to five times. The first cutting, without irrigation, is preferable for seed. Handle the seed crop as little as possible; let it get thoroughly dry, and thrash. The hay is raked the same day it is cut, unless very heavy. Stacked in the usual manner, it never heats or molds. Alfalfa can be put in stack for about \$2 per ton. If a plenty of water, \$50 per acre is a fair value for land. Baling costs \$2 per ton; the size of the bale does not affect its keeping. Yields of hay vary greatly in different years. The ordinary thrasher, with change of screen, is satisfactory. Hay has ranged from \$5 to \$8 per ton; seed, from five to eight cents per

pound. Swine do well on alfalfa pasture and never bloat. They will not fatten on it, but grow rapidly, if they have some other food with it. It is very satisfactory for horses and sheep. Only cattle and sheep bloat, and then a little rapid driving will generally relieve them; have occasionally punctured them when severely bloated. Alfalfa cannot be grown here without irrigation. I have never known of an instance where the plant has died after being well rooted. Here it is well matured the third year, and, if cut instead of being pastured, would live forever. If it is desired to rid the land of it, pasture swine without rings, and that will end it. Alfalfa is a plant needing heat and moisture to make a rapid growth. It is very easily killed by excessive moisture, or by overflow in hot weather. It should never be pastured, but cut, and fed green or cured. Here we both pasture and cut, and, as a consequence, have to reseed every few years.

### Utah's Lesson on Sugar.

There are many States that can take a lesson from Utah with profit to themselves. In no equal area of the Republic have greater results been achieved in the face of greater difficulties. The diversities of agriculture, the development of manufactures and, above all, the nurture of a strong feeling of local pride—which, happily, is in subjection to a yet stronger feeling of nationalism—in Utah would be remarkable in any State or Territory, and are peculiarly remarkable in a community that has been so sorely exercised in the solution of social problems, as well as in those of successful resistance to adverse physical phenomena.

Among the industries created and nourished by the preserving genius of the people of Utah is that of beet sugar. The demand for sugar in Utah requires about 15,000,000 pounds for its yearly supply. The genius of the people already has furnished about one-third of this from beet roots, grown on Utah soil, converted into sugar by Utah working people and by the aid of machinery that is almost wholly of American construction. The Utah people justly pride themselves not a little on this last circumstance. Their Lehi beet factory comes nearer to being purely American in every item of its construction than any other sugar factory in the United States.

From a recent report we condense a few and a striking corollary. The fact is that the Lehi factory, with a capital of \$700,000, yearly pays out \$230,417.64, or much more than a third of its capital stock, for labor and material used in the manufacture of beet sugar. The account stands thus:

|                                          |              |
|------------------------------------------|--------------|
| 26,800 tons of beets, which cost         | \$143,233 96 |
| 4,500 tons of coal at \$3                | 13,500 00    |
| 200 tons of coke at \$17 10              | 3,420 00     |
| 1,600 tons of lime rock at \$2 50        | 1,022 50     |
| 40,000 double sugar bags at 14 1/2 cents | 5,800 00     |
| 4,150 yards of heavy duck at 15 cents    | 622 50       |
| 1,050 yards of German duck at 50 cents   | 525 00       |
| 6,000 pounds of sal soda                 | 150 00       |
| 4,500 pounds of tallow                   | 270 00       |
| 30,000 pounds of sulphur                 | 600 00       |
| 10,000 pounds of muriatic acid           | 350 00       |
| Laboratory and other supplies            | 5,000 00     |
| Paid for labor                           | 52,923 58    |

Total cash outlay to produce 4,000,000 pounds of sugar.. \$230,417 64

The number of people employed in the factory, inclusive of girls and boys, was 2000. The season of work covers 110 days.

Now, if one factory which turns out no more than 2000 tons of sugar a year expends \$230,417.64 a year for labor and material, what would be the amount of money expended for American-grown cane and beets, for American labor in sugar farms and factories and for American-made machinery and chemicals if our market were supplied wholly with home-made sugar? The answer to the question is the striking corollary to the Utah fact. A partial answer is to be in this statement:

If the entire amount of sugar consumed in the United States during the fiscal year ending June 30, 1893, had been manufactured in this country, the people of the United States would have received the following for sugar and beets, etc.:

|                                    |                  |
|------------------------------------|------------------|
| Cost 21,574,000 tons raw material  | \$115,313,337 80 |
| Cost coal                          | 10,867,500 00    |
| Cost coke                          | 2,753,100 00     |
| Cost lime rock                     | 3,238,112 50     |
| Cost sugar bags and ducking        | 5,505,737 50     |
| Cost sal soda                      | 170,750 00       |
| Cost tallow                        | 217,350 00       |
| Cost sulphur                       | 183,000 00       |
| Cost muriatic acid                 | 281,550 00       |
| Cost laboratory and other supplies | 4,023,000 00     |
| Cost wages                         | 42,603,562 40    |

Total that would have been expended at home.. \$185,546,000 20

The cost of machinery and of transportation of raw and manufactured material is not included in these estimates; probably they would add a third to the total.

But even on the basis of \$185,546,000.20, we have an expenditure on home industries and on home labor far exceeding—very near doubling—that of the value of all the wheat exported from the United States. The exports of wheat during the year 1893 were of the value of \$93,534,970. The amount spent in producing American-made sugar in producing sufficient for the supply of the American market would have been near to \$186,000,000. Is not Utah giving valuable suggestions to farmers who are fretting under the unprofitableness of 50 cent wheat?—Chicago Inter-Ocean.



## THE HOME CIRCLE.

### The Cry of the Unsuccessful.

Have you thought, in your moments of triumph,  
O, you that are high in the tree,  
Of the days and the nights that are bitter  
So bitter to others and me?  
When the efforts to do what is clever  
Result in a failure so sad,  
And the clouds of despondency gather  
And dim all the hopes that we had?

Have you thought when the world was applauding  
Your greatness, whatever it be,  
Of the tears that in silence were falling—  
Yes, falling from others and me?  
When the hardest and latest endeavors  
Appeared to be only in vain,  
And we've curtailed our eyes in the night-time,  
Indifferent to waking again?

For it wants but a little reflection,  
And you'll be the first to agree  
That the favors in which you are basking  
Are darkness to others and me:  
And it's hard when you lie in the sunshine  
Of fortune so smiling indeed,  
If you have not a thought for the many  
Who'll never—can never succeed.

### An Easter Story.

Eunice Murray brushed the dust from the porch steps with an impatient motion. Though it was Saturday morning her release from lessons meant captivity in a disagreeable round of household duties.

"I wish we hadn't moved here," she meditated. "People in our circumstances haven't any right to pitch their tents where they can feast their eyes on so much grandeur without being able to touch it."

She rested idly on her broom as she frowned fiercely at the house opposite. This house was a fine old homestead with handsome, well-kept grounds, sparkling fountains, and great stone lions guarding the gateway.

It had been an object of speculative interest to Eunice and her sister Lena during their sojourn in their present home, a snug little cottage of which they had taken possession but a week before.

Her survey did not tend to improve her frame of mind, for when Lena opened the door, calling briskly:

"You'd better get a move on you, Eunice! The dishes won't wash themselves, and I don't think your last dishwashing scheme would stand a practical test. You know the occupants of Poverty Palace can't indulge in a rest from labors during the giddy whirl of work hours!"

"Eunice, instead of responding pleasantly, as she usually did to Lena's nonsense, said snappishly:

"The dishes can wait till I'm ready! Out of school hours it's nothing but a repetition of that old theme—sweeping and dusting and dishwashing—dishwashing and sweeping and dusting, with baking and darning occasionally thrown in as marginal notes. I just mortally hate it all!" She whisked the dust into the street with a vigorous sweep of her broom, and, after glowering at it a moment as though daring it to return to further disturb her peace of mind, she ran up the steps to the house.

"The girl at the window of Cræsus Cottage had the full benefit of that heavy villain act," laughed Lena.

"I don't care! She's been comparing her grand and idle estate with my humble drudging lot ever since I've been out here."

"She didn't look a bit as if she was doing anything of the kind," affirmed Lena, closing the door and following Eunice into the kitchen. "I believe Poverty Palace interests her as much as Cræsus Cottage does us. What lovely hair she has! But how dreadfully languid and lazy she must be to enjoy sitting at that window by the hour doing nothing. It wouldn't agree with me, I know."

"Well, it would with me," retorted Eunice, quickly; "I like to have the leisure to do the kind of nothing she does—painting and embroidering and reading to her heart's content. I haven't the least doubt that she uses her carriage every time she goes out. She'll frisk by us in fine style to the Easter service to-morrow, and spoil the whole day for the rest of us less favored ones—I'd like to have a carriage at my

disposal! I'd never walk another step if I had."

"I hope there's no such ill-fortune in store for the Princess of Poverty Palace," laughed Lena, as she took baby Rob from her mother, who had just brought him into the room fresh from his bath.

"No such luck you mean, Lena," returned Eunice. "I don't suppose I'll rise out of this rut. I expect nothing better than to dig and delve all my life."

"But with strength and health at your command, if you direct your ambition properly, my dear," put in Mrs. Murray, pleasantly, "you can always dig and delve your way into prosperity." As Rob, with outstretched hands and laughing face, "Goo-goo'd" his approval of her sentiment, Eunice, finding herself in the minority, withdrew from the argument.

All day long the atmosphere of the little house was charged with electricity. Each time Eunice glanced from the window the bright head across the way invariably met her view.

"I shouldn't wonder if she'd be at that window bright and early to-morrow morning to see what kind of Easter costumes we have," cried Eunice, late in the afternoon. "I can't bear to go to church in that old brown thing of mine! We ought to have had new dresses for Easter, like other people."

"But you know mamma said the moving and extra expenses ate up every bit of our spare money," expostulated Lena. "I think we'd pass in a crowd very well as we are."

"Oh, of course it doesn't make any difference to you, Lena! You don't care about nice things as I do."

"I do," retorted Lena, up in arms to defend her rights. "I care every whit as much for nice things as you do, Eunice Murray; but I don't believe in making our lives a burden because we can't have them!"

The atmosphere was considerably colder after this little gale, and the indications for freezing weather were quite pronounced. Eunice swept past Lena with something of the same whisk she had used in displacing the dust on the pavement that morning, Lena, in her turn, assumed a tragic air of defiance which sat ill upon her merry little face. Any remarks which were exchanged in relation to their duties passed their lips at sword's points. In the evening Lena began to relent.

"I don't fancy this war to the knife business; it's awfully trying," she reflected, as she wiped the supper dishes which Eunice lifted from the dishpan and placed before her with the majestic air a queen might have assumed in conferring a favor upon her subject. She was cudgeling her brain in a vain endeavor to find a speech which would restore her to favor when the doorbell rang.

"I wonder who it is!" she cried, relieved beyond measure to see Eunice unbend sufficiently to glance inquisitively through the half closed door into the hall beyond.

"Probably one of the new friends we've made since we've lived here—either the butcher, the baker, or the candlestick maker," rejoined Eunice dryly; but the edge of her sarcasm was wasted in the flutter that followed.

Mr. Murray had answered the bell. "What's up, girls?" he cried entering the kitchen. "Here's a note from the house you admire so much across the way. A servant of Mr. Everett's handed it in. It's addressed to Miss Eunice Murray, and is quite a dainty affair indeed."

"From Cræsus Cottage! Open it, Eunice—open it! I'll help you read it!" Lena exclaimed, her last vestige of coldness taking flight before the orange-scented breezes which had blown in upon them.

Eunice also thawed under their balmy influence, as Lena slipped her arm about her, reading with her.

"It's come—it's come!" Lena cried, wildly, giving Eunice a rapturous little hug. "I knew it! The Princess of Poverty Palace couldn't long remain in seclusion!"

"It is signed 'Jean Everett,'" explained Eunice, as her mother was

drawn into the room by the commotion. "She writes to ask me if I would favor her by running over to-morrow morning. She explains that she cannot come to us, as she is confined to the house at present. She feels sure we are about the same age, she says, and she would be delighted to be friends with me, if I am willing."

The note was read and reread and commented upon from every point of view.

Mr. and Mrs. Murray agreed that it would be right for Eunice to respond as desired.

"I'm afraid she wants to patronize me," interposed Eunice.

"I don't think so. She is ill, and probably longing for young companionship," Mrs. Murray said, gently.

"She has looked lonesome sometimes," added Lena, thoughtfully. "That may be the reason she spends so much time at the window."

So Eunice's objections were overcome, although reluctantly.

"I don't care to go at all, my dress is so shabby," she confessed to Lena, later, as she shook out the folds of the much despised brown gown and took a necessary stitch where the trimming was worn.

"But it doesn't look so on you," soothed Lena. "That dash of tan in it makes it very becoming; and the truth is, Eunice, you give it a style no one else could. Then you know your gloves cleaned beautifully; and I'd defy even a professional to find out that your hat had sprung from the ashes of your old one."

"You're a genuine comforter, Lena; so I'll believe you to oblige you," laughed Eunice. "Though I'm convinced against my will, I'm of the same opinion still!"

The following morning, when Eunice was ready to depart on her mission, a little bustle of excitement stirred the calm Sabbath quiet.

"Do hurry, Eunice," cried Lena, fluttering about her. "Cræsus Cottage is waiting to receive you with open arms. Be sure, though, to be home in time to go to church with me. I won't be deserted for anybody, so mind!"

"No fear of that, Lena. I'll never desert Mr. Micawber—no, never!"

She walked to the corner of the street to secure a good crossing. It was a clear, sunny morning. Nature, arising from her wintry sleep, had cast a thick sprinkling of green upon the tree and lawn and hillside. There was an exhilarating crispness in the atmosphere which Eunice found quite refreshing.

Under the fire of eyes which followed her departure she found it difficult to maintain the stately, dignified carriage she had determined to assume. Her mind dwelt upon some grandiloquent phrases she had strung together the previous evening to form an appropriate Easter greeting.

"I'll put it as prettily as I can; and I'll be as dignified as a duchess throughout our interview," she thought proudly. "Miss Everett must be made to realize that I am not one to be stunned by her luxurious surroundings."

But, nevertheless, her heart was palpitating fiercely as she passed the great lions at the gate. Her approach must have been noted from within; as she ascended the broad marble steps a servant swung open the massive door, admitting her at once.

It was by a strong effort of will that she refrained from exclaiming aloud. In spite of herself she was appalled for a moment by the magnificence surrounding her. The great vaulted hall, with its painted panels and splendid statuary, brought to her mind descriptions of art galleries of which she had read.

A solemn stillness reigned throughout the house. It was unbroken as she followed the servant, their footfalls sinking without sound into the soft, thick covering on the floor. Her inward rebellion was fed by the knowledge that a subtle something within her seemed to harmonize with the grandeur into which she had stepped. One glance around the room into which the servant ushered her revealed splendors only the possession of wealth

could provide. Rare paintings, costly bric-a-brac, heavy mirrors and exquisite draperies struck upon her sense of sight with delightful harmony.

Jean Everett was reclining in a great chair, her golden head pressing a soft pink cushion. It was a queer-looking chair, and as Eunice's eyes rested upon it, something jarred her senses like a false note ringing out in the midst of a melody.

"Wheels!" she was conscious of thinking; "they don't belong here. Why does she have wheels on her chair?"

Jean, leaning toward her with eager eyes and outstretched hands, did not arise.

"How good of you to come!" she cried; "I would have gone to you if I could have walked. How strong you are!" she added, impulsively, regarding with wistful eyes Eunice's erect young figure. "I—oh, I have never walked in all my life!"

The great room with its magnificent trappings seemed to swim in a circle about her as Eunice, forgetful of her dignity, sank trembling into the chair the servant had placed for her. She realized there was no longer any need for the fine Easter greeting she had so carefully prepared. A revulsion of feeling threatened to overwhelm her, and it was with difficulty she restrained a storm of sobs.

When she spoke there were indications of tears in her tones.

"I did not know you were unable to walk," she said, simply. "I am so sorry—so very, very sorry!"

She felt a wild desire to fling herself at Jean's feet and beg forgiveness for her past week's uncharity.

"Then you will be friends with me?"

Jean cried, eagerly. "You must have been surprised at my note," she continued, not waiting for an answer; "but I've longed to know you since you moved here. It was a fancy of mine to have you come to me on Easter. Everything seems to rise to new life that day, and I wished so much that you would lift me into your bright, beautiful life, and give me a part in it. It is so full and complete compared with mine." She sighed softly, as she paused a moment before she said tremulously: "I have no mother and no sister in mine, you know."

No mother and no sister! Eunice had never imagined life without them, and the thought fell upon her with a burdensome sense of oppression. In an impulse of tenderness she reached out and clasped Jean's thin white hands in both her strong muscular ones.

"If a place in our life will help you any, Jean," she said, all formality forgotten, "you will certainly receive a warm welcome there. But it is so humble compared with the splendors about you. The possession of wealth always seemed to me the 'open sesame' to happiness."

"Oh, no!" cried Jean, earnestly; "you do not know what you say, Eunice! The silken quilts and velvet bed, and pillows of satin for my head, are here in abundance; but I'd give them all this minute for the wealth your little home contains. Money cannot buy a mother's love nor a sister's tenderness. And oh, Eunice, it can't put a broom in my hand and give me

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power to swing it about with the strong, swift strokes you use!"

Eunice made no response. But what a different view of her homely life Jean's words presented to her.

"Papa is the best of men," went on Jean, more quietly; "but he doesn't realize how lonesome I am."

"But your teacher?"

"Oh, yes! She is my companion also. But she is dignified and precise; it is her nature, you know. We don't laugh and chat as you and your mother and Lena do. Won't you tell me all about Lena? What a sweet, merry face she has!"

There was a pathetic, coaxing tone in Jean's voice which Eunice could not withstand. In another moment she was telling of her home life and pursuits she had disliked so much. Before she was aware of it she had drifted into the history of Poverty Palace and Cræsus Cottage.

"It was a conceit of Lena's, you know," she added, half apologetically. "Our house was so small compared with this. It seems to me like a pigmy sitting at the feet of a giant."

Jean laughed merrily. "What quaint fancies you and Lena have," she said. But after a time she grew quite grave.

"Oh, Eunice," she cried, "it is true! Health and home love to make your home a veritable palace. And the lack of it—oh, the lack of it cramps this great place into the tiniest mite of a cottage!"

"But there will always be a nook for you in Poverty Palace, Jean," returned Eunice, gently; "and you must soon come and take possession."

"Indeed I shall!" Jean answered gladly. "I'll be there in spirit until it is warm enough for Thomas to wheel me outdoors."

Busily engaged in exchanging confidences, they failed to notice how the time had sped, until the church bells rang with startling distinctness.

"There! I must go!" Eunice exclaimed regretfully; "and I haven't given you my Easter greeting yet," smiling a little at the memory of the Turveydrop deportment she had brought with her.

"Yes, you have, Eunice," returned Jean, gently. "You met me when I turned to you, and you've gladdened my heart into new life. What grander Easter greeting could you bestow?"

Eunice's answer was a closer hand-clasp; but she was inwardly conscious that in meeting Jean her own spirit had been uplifted above the petty discontent which had marred her otherwise beautifully adorned life.

As she bade Jean good-by her eyes wandered through the window to the little house opposite. It was bathed in sunshine; the same Easter sunshine which touched into diamond drops the waters of the fountains outside cast a golden glory over her cottage home. Lena, equipped for church, stood in the doorway, waiting for her coming. Behind her Eunice could distinguish her mother's form, with the crowing baby in her arms. Jean's eyes followed hers.

"It is a lovely thing to be the Princess of Poverty Palace," she said tenderly.

As Eunice turned away, the tears filling her eyes were not for herself nor for any luxury which her life might have missed.—Independent.

#### A Long Life.

Sir Benjamin Richardson, M. D., of England, thinks that the normal period of human life is about 110 years, and that seven out of ten average people could live that long if they lived in the right way. They should cultivate a spirit of serene cheerfulness under all circumstances and should learn to like physical exercise in a scientific way. No man, he says, need be particularly abstemious in regard to any article of food, for the secret of long life does not lie there. A happy disposition, plenty of sleep, a temperate gratification of all the natural appetites, and the right kind of physical exercises, will insure longevity to most people.

THE salary of the President of Mexico is \$30,000.

#### Gems of Thought.

Hatred is the madness of the heart.—Byron.

Fidelity is seven-tenths of business success.—Parton.

Haste trips its own heels and fetters and stops itself.—Seneca.

There is no oblique way in reproof which takes off the sharpness of it.—Pope.

Two persons cannot long be friends if they cannot forgive each other's failings.—Bruyere.

There is no part of history so generally useful as that which relates the progress of the human mind, the gradual improvement of reason, the successive advances of science, the vicissitudes of learning and ignorance, which are the light and darkness of thinking beings, the extinction and resuscitation of arts and the revolution of the intellectual world. If accounts of battles and invasions are peculiarly the business of princes, the useful and elegant arts are not to be neglected; those who have kingdoms to govern have understandings to cultivate.—Dr. S. Johnson.

A good woman is the loveliest flower that blooms under heaven; and we look with love and wonder upon its silent grace, its pure fragrance, its delicate bloom of beauty. Sweet and beautiful! The fairest and the most spotless! Is it not a pity to see them bowed down, or devoured by grief inexorable, wasting in disease, pining with long pain, or cut off suddenly in their prime? We may deserve grief, but why should women be unhappy? Except that we know that heaven chastens those whom it loves; being pleased by repeated trials to make their pure spirits more pure.—Thackeray.

#### Paragraphers' Pleasantries.

"Mamma," said little Elsie, as the family circle was discussing acquaintances, "I know two men, one is a gentleman and the other is papa."

The Wife—One-half the world doesn't know how the other half lives. The Husband—Well, it isn't the fault of your sewing society, anyway.—Life.

"Blixton has spent a fortune on his daughter's voice." "Yes, but he's repaid for it all." "You have heard her, then?" "No, she has lost her voice entirely."—Chicago Inter-Ocean.

"Is your husband out of politics?" asked the visitor. "Yes," replied the wife of the ex-statesman. "I think he must be. Every time I mention an election he says he's not in it."—Washington Star.

Mrs. Rash—How do you manage to get your cook up so early? Mrs. Dash—Well, I hunted up a young and good-looking milkman and hired him to come at five o'clock.—Louisville Courier-Journal.

Weary Walker—Say, mister, gimme a dime. Dignified Wayfarer—Give you a dime! I think you are more in need of manners than money. Weary Walker—Well, I struck yer fer what I t'ought yer hed most uv.—Harper's Bazar.

#### Curious Facts.

Coral larvæ are born alive and swim off to seek a locality on which to settle. After they have once become fixed they never again change place.

There are some drawbacks about very fast time on railroad trains for the engineers and firemen. It takes seven relays of locomotives and men to carry the "flyer" from New York to Chicago, and so great is the strain on the engineers that they have to lay off a day between runs.

Aluminum is not, as is quite generally supposed, in itself a strong metal. It is only half as strong as wrought iron and has a very low elastic limit. It is when combined with other metals that its real value begins to appear. With eight to twelve per cent of copper added, making aluminum bronze, one of the densest, finest-grained and strongest metals known is developed.

#### DOMESTIC ECONOMY.

##### Practical Information About Dried Fruits.

It is not generally known that California fruits when dried are presented in the most desirable form in which they can be obtained, for the reason that all other kinds of fruit put up for shipment to Eastern markets are of necessity taken from the trees before being perfectly ripened, and on that account are deficient in flavor, while dried fruits are allowed to become entirely ripe before being picked.

Another thing not understood is that dried fruits are the most economical to use when properly prepared and cooked. For instance, it requires five to six pounds of ripe apricots, six to eight pounds of peaches or pears and about two and one-half pounds of California prunes to make one of dried, and these fruits are subjected to the sun's rays for a whole week in the drying process. This must be understood and taken into consideration when preparing the fruit and counting the cost of the same. If this length of time is required to properly dry these fruits it is manifestly unreasonable to expect that they can be prepared properly for cooking in a few hours as is the usual custom.

To get the full value and flavor out of these fruits they must be brought back to something near the condition they were in when taken from the trees.

To do this the water which was extracted in the drying process must be replaced largely, which will require from twenty-four to thirty-six hours of soaking in as much water as they will absorb, and you will be surprised to see how much they will absorb if given time, and you will then have not the pound of fruit you started with, but three or four times the quantity of large, delicious looking fruit, such as it was when taken from the tree.

This fruit will then cook in a short time and when the requisite amount of sugar has been added will give not only as attractive but as delicious a dish of fruit as it is possible to prepare, and if you will figure the cost of the finished product you will find it to be but a few cents per pound.

All kinds of fruit butters, marmalades and jellies can be made of these fruits, better and at much less cost and labor than the old way, and when our dear mothers and wives can be made to understand what the possibilities of California dried fruits are, and how easily they can be made to take the place of much of the fruit they are accustomed to put up in the hottest of weather, they will have learned to save themselves a world of hard work and discomfort.

We venture the assertion that any good housekeeper who will follow closely the formulas here given and observe the results will not give herself any further trouble about the next winter's supply of preserved and canned fruits.

*Stewed Apricots.*—To one pound of the fruit, thoroughly washed in several waters and drained, add three pints of cold water and allow them to soak twenty-four hours. Then place in a granite or porcelain-lined sauce-pan and simmer gently one hour in the same water they were soaked in, keeping closely covered. A few minutes before removing from the fire, add four ounces of sugar and allow it to boil up well. Then turn into a suitable dish and keep covered until cool and they are ready to serve. This will give two

quarts of delicious fruit and will cost in the East about four cents per pound.

*Stewed Peaches and Pears.*—To one pound of above fruits, thoroughly washed in several waters and drained, add three and one-half pints of cold water and allow them to soak thirty hours. Then proceed precisely as with apricots, except that they should be cooked half an hour longer and they only require two ounces of sugar. If the peaches are peeled, twenty-four hours will be sufficient time to soak them and one hour to cook them. The above will give considerably over two quarts of fruit and will cost less than four cents per pound.

*Stewed California Prunes.*—To one pound of fruit, thoroughly washed in several waters and drained, add three pints of cold water and allow them to soak twenty-four to thirty-six hours, preferably the latter time. Then proceed as with apricots, except that the prunes will not require any sugar and will cook in a little less than an hour.

This will give four pounds of prunes, such as you have not been accustomed to, and at present prices will cost two and three cents per pound.

*Stewed Silver prunes* are cooked in the same manner, except that they will require four ounces of sugar to one pound of fruit.

*Stewed Cherries.*—To one pound of cherries, well washed and drained, add one quart cold water and allow them to soak twenty-four hours, then proceed as with apricots, except that they will only require two ounces of sugar.

*Fruit Butters.*—Apricot, peach, pear or prune butter is made by treating the fruits precisely as if intended for stewing but before putting them on to cook they should be passed through a colander and then boiled hard with constant stirring until of the proper consistency; then add sugar to taste, then continue the cooking a few minutes, and they are done.

A mixture of equal parts of apricots and prunes makes a very palatable butter.

*Marmalades.*—Prepare the fruit in same manner as for butter, then boil until of proper consistency, which should be thicker than butter; then add as much sugar as you have of the fruit and continue the cooking a short time until the sugar is thoroughly dissolved.

THE *Moniteur Industriel* records the fact that on the shores of Brittany, between St. Malo and St. Lunaire, in the vicinity of the St. Enogat station, at a place called Port Blanc, the tides have lately displaced a considerable amount of sand to a depth of nine to thirteen feet. Forests which have been buried for eighteen or twenty centuries have been thus brought to light, to the great astonishment of the seafaring people of the country. A great forest has in fact been discovered in process of transformation into coal. Ferns and the trunks and barks of trees are to be seen in an advanced state of decomposition. They are already beyond the peat stage, showing the films and flakes which are found in coal. Some of the trunks are sixteen feet in length, still very distinct, although becoming quickly transformed.

There was a queer sort of hailstorm in an East Indian village not long ago. There was a fall of rain, preceded by a windstorm, and with the rain came a shower of hailstones, which continued for over an hour. The most curious part of this occurrence is that the hailstones, when touched, were not at all cold, and when put in the mouth tasted like sugar.

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## Patrons of Husbandry.

### The Proposed Summer Meeting.

The proposition made by Highland Grange, as outlined below by its Master, Mr. Edward F. Adams, strikes the RURAL PRESS as being a capital one. It is for a camp meeting this summer in the Santa Cruz mountains, to be conducted upon educational and social lines for the benefit of Grangers and their friends. The Universities have promised to provide lecturers on both economic and practical subjects; and there is no doubt that other lecturers could be secured for the asking. For example, Ex-Chief Justice Currey (whose letters on State expenses, printed in the RURAL PRESS last summer, attracted wide attention) would no doubt gladly give a lecture on taxation. Gov. Budd would no doubt be glad to confer with the Grangers of the State on the conduct of public affairs. Senators and members of Congress would be only too ready to come and confer with the producers upon the needs of the State. In these and many other ways the scope of such a summer meeting could be made very wide. It is not too much to say that it would be a very notable event—one whose effort would be not only to yield instruction and pleasure, but to largely boom the Order as a practical and effective influence in the State.

The cost would be comparatively light. There would be no hotel bills, no charges for hall rent, etc.; and it could be held at a time when farmers and their families could easily attend. No better place could be named. The Santa Cruz mountains, always beautiful, are especially so in summer, and the climatic conditions would prove especially agreeable to dwellers in the hot interior valleys. It would be easy, as Mr. Adams suggests, for people to come with their own teams; but for those who prefer the ordinary mode of travel there is every convenience. Trains of the S. P. C. R. R. pass near the proposed camp ground every few hours, and there is no doubt that special rates for fare could be secured. The place is midway between Santa Clara and Santa Cruz counties and easy of access to the most progressive and populous fruit regions of the State.

It is a project of great promise and the Grange ought to carry it out.

### Highland Grange's Plan for a Summer Grange Meeting.

TO THE EDITOR:—Replying to your request for some details of the proposal of Highland Grange to establish an annual Farmers' Camp of Instruction in the Santa Cruz mountains, I have to say that, our Grange being new and small, it would be presumptuous for us to assume to direct the details of such an enterprise, but, in the enthusiasm of our youth, the idea having occurred to us, we have taken the liberty to propose it to San Jose Grange and have requested them, if they approve of the plan, to assume the active leadership in the movement. The details, therefore, whatever they are, would be worked out in that and other Granges in the process of their operation.

I can, however, give you some notion of the details as they present themselves to our minds, and the same may be useful as a basis to start from.

In the first place we have not considered it at all as a State enterprise, although we should hope for and ex-

pect the hearty endorsement of the State Grange, and doubtless more or less attendance from all parts of the State; but the thought is to gather in one spot as many as possible of the farmers of the bay and coast counties during the weeks of recreation which all farmers ought to take, and very many do, thereby bringing them into contact during a period of from two to four weeks not only with themselves but with as many as possible of other classes, and all joining in the scientific study and discussion, under the direction of representatives of our two universities, of the serious problems that affect our lives.

These problems are of two kinds, economic and agricultural. It is proposed that Stanford University shall assume the direction of our economic study, and the State University that of the agricultural work. The proper departments of the two universities have each agreed to accept the charge whenever it shall be tendered to them by the Granges, provided that the enterprise shall be strictly and entirely under the control of the Granges, and that there be such an assurance of a reasonable attendance for the first year as will warrant the effort of arranging for the instruction.

It is not presumed that many farmers will be able to spend so long a time as four weeks away from their homes at the camping season of the year, although some could do so and also the families of others. There would be more or less of them coming and going during the season, the programme being published in advance so that all could arrange, as far as possible, to attend at the times when subjects of special interest to themselves were to be discussed. The obvious plan would be to open the camp perhaps in June and continue it as long as there was any one to occupy it, arranging for the presence of the university professors during the time which promised the largest attendance. For the first year it is quite likely that two weeks are all that could be arranged for, and I have supposed that the arrangement would be a lecture and discussion on an economic subject in the morning and the same on an agricultural subject in the afternoon, or the reverse, leaving the evenings for such social and literary entertainments as may be improvised. This programme could be followed for five days in the week, which would give twenty to thirty hours for serious work and the remainder of the time devoted to rest and recreation.

The agricultural topics of interest will suggest themselves to all; in a two weeks' daily systematic course of work, more good can be done than by the desultory discussions of our conventions, or even by our very valuable Farmers' Institutes in years. The matter of systematic economic study in a farmers' assemblage is, so far as I know, new. With the next generation I expect such studies will be common and usual. It is time we were beginning.

Just what economic topics would be taken up I do not know, but I can think of many which could be discussed with profit. For example:

*The Economic Gain of Co-operation;* just what money can be made by it and how? I assure you the ideas of most men on this subject are very shadowy and uncertain.

*The History of Money,* and what classes have suffered the loss when a currency of less intrinsic value has taken the place of one of greater intrinsic value.

*Transportation* as it affects the prices of what we in California buy and what we sell, including what would probably happen under government ownership of railroads.

*The Profit of Building Good Country Roads; The Tramp and Labor Problems; Taxation;* and so on and so on forever. There is no end to them. I suppose the form of instruction would be lectures, followed by general discussion, in which the professors would learn as much from their audience as the audience had previously learned from them, and I suppose the greatest educational value of the meeting, and the point in which farmers would learn most from

their instructors, would be the spectacle of earnest men striving, not to establish this or that dogma, but simply to ascertain and declare *what is true*, whatever it may prove, and not reasoning upon any fact until it is proved to be a fact. There is no calculating the economic value of such a habit if farmers would only acquire it and stop believing and acting upon whatever they see printed.

It would depend on the ladies themselves whether topics of special interest to them, such as floriculture, scientific farm cooking, household and personal adornment and the like, were regularly taken up. They could have them if they desired them and made a fuss about it. Otherwise, I suppose they would not get them.

That is the notion of the educational features as they present themselves to our minds. What form they would assume in the hands of those who will have charge of the matter of course could not be said. There are many ways of reaching the same end, and no two would approach the subject from the same standpoint. The beginnings, in any event, will be small, and the enterprise will take form by natural growth. But the educational work would occupy but twenty or thirty hours of the 168 which each week includes; the remainder of the time would be devoted to sleep and to such recreations as are common to camp life.

The locality suggested is right here. Of the attractions of this vicinity, modesty forbids me to speak. Besides, if I spoke and did not tell the truth, I should not satisfy my own conscience; and if I did tell the truth, nobody would believe me. Suffice it to say, Highland Grange is located in the most beautiful place in the world.

San Jose Grange is now considering the matter, and it is to be laid before Watsonville Grange by Worthy Master Roache, who, in a letter to me, gives the project his hearty approval. We were visited last week by a delegation of twenty from San Jose Grange, who spent a day and a night with us, viewing the country and assisting us at our Grange meeting in conferring the third and fourth degrees on a couple of young ladies whom we took in to practice on in preparation for a large class which we expect to have soon. What our visitors think of us and our country will appear in due time from their report to their Grange, but I cannot say too much of the pleasure which their visit afforded us or of the enjoyable features which they added to our Grange meeting. The delegation included Bro. Worthen, Master of the Grange, and his good wife, who is about the best Secretary I ever saw; Overseer S. P. Sanders and wife, Bro. C. W. Childs, principal of the State Normal School, Bro. and Sister—well, it is of no use. I cannot write out a list of twenty persons with the appropriate compliment to each, but they were all bright men and women and good Grangers, and we were glad to see them come and sorry to see them go. Bro. Amos Adams, who stated in last week's RURAL that he was coming, was compelled to wait over for the next delegation, which we hope will come soon.

Whether the project, as it has been outlined by our Grange, ever materializes or not is yet to be determined. It is first to be settled whether it would be useful and agreeable, as to which I presume there is but one opinion; next, whether a sufficient number of persons would avail themselves of the opportunity to make it worth doing. This would be ascertained by actual canvass. We expect the beginnings to be small, and the university men, who heartily favor the project, are extremely moderate in their requirements, asking only the assurance that fifty heads of families will be present during the lecture period. As our own neighborhood would supply half that number, that requirement would not seem difficult to fulfill—in fact, from the interest expressed to me by many members of San Jose Grange, I presume that at least 150 to 200 families would be represented the first year. Finally, it is

to be considered whether the enterprise would interfere with anything more useful and practical which may be proposed by the officers of the State Grange, as to which I think we may safely say that the more educational influences we create the faster they will multiply, and that all should be fostered and cultivated.

If it were decided to establish such a camp, it is then to be considered whether this is a suitable place. As to this, considering that health and recreation will probably be the main object of most who attend, it is desirable that the spot selected should afford just the change most desirable for those who will be present, who will be mostly from the coast and bay counties, for the inhabitants of which the warm air and the altitude (2000 feet) of this vicinity is far better than the sea coast, which would be preferred by those of the interior valleys. Our proximity to the sea at Camp Capitola—which is in full view—enables frequent visits to be made there for bathing. It must be easily accessible by team, so that those within reasonable distance may drive to the camp, taking their feed and keeping their teams for drives about the mountains and to the sea. It must also be so situated that those preferring to board can do so close by the camp and at moderate rates. This being a well-known summer resort, affords all these facilities. It will also be a great help if seconded by a community able and willing to give material aid in preparing the camp for occupancy. This community can, and I think will, do all that is necessary in this direction. It is a strong and very intelligent country community. It is proposed to occupy a tract, properly watered, which will, in time, but not at first, be purchased and presented to San Jose Grange, that being a strong Grange numerically, financially and intellectually, and the most suitable body to

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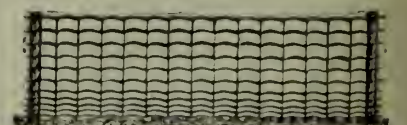
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own and manage the property. It would not be wise to attempt to create a new board from all the neighboring Granges, which would certainly be very expensive or very inefficient. The committee managing the matter must be composed of those who naturally meet very often, as active members of the same Grange always do.

Our grange meets the first and third Friday evenings in each month. Come and see for yourself.

EDWARD F. ADAMS.

### The Roseville Inspection.

TO THE EDITOR:—In obedience to a pressing invitation from Roseville Grange to Brother and Sister B. F. Frisbie and friends, the writer along with Inspector Shoemaker attended the Roseville Grange inspection on Thursday the 18th inst. Roseville forms the junction of the Central Pacific and California & Oregon Railroads. It is situated eighteen miles northeast of Sacramento and about thirty-five miles south of Marysville, being on rising ground in the edge of the Placer county foothills, and, unlike the plains below, its location is or was at one time largely covered with oak timber and various kinds of underbrush. The soil is a rich clayey loam and very productive of fruits and cereals, being all occupied and in a high state of cultivation. The vicinity of the town borders on the Haggin grant of 40,000 acres, which fact shuts out settlers whom otherwise would come and thereby cause Roseville to be a great central trading point. As it is, she must wait her turn in the development of this warm foothill country. Roseville is, nevertheless, a right smart town and contains several stores and hotels, also a large number of elegant residences having yards and gardens nicely laid out, cultivated and all embowered with roses and other flowers, showing that this place was rightly named.

There is no better fruit section in the whole State than here, as can be seen any day from the car window by the traveler as he ascends toward the summit through the towns of Rocklin, Loomis, Newcastle, Auburn and Colfax. The best and purest of water exists in abundance for irrigation and domestic uses, although I believe irrigation is not generally practiced nor required. The entire region being undulating the drainage is perfect, rendering it one of the healthiest spots in the State. With such surroundings, is there any wonder that we find here one of the best rural organizations in existence?

Roseville Grange is presided over by a woman, which fact doubtless accounts for the prosperity and discipline observable in all its departments. The lady's name is Mrs. Jennie Gould, and she presides with such dignity, ability and self-composure as is rarely found in the sterner sex. At the inspection meeting her work was done like a well-posted man would do it, not at all as if to show how well a woman can handle the governing reins. Roseville Grange may well be proud of its Master, and other Granges should take a lesson from this digression in the selection of presiding officers. The lady's husband is Lecturer, and it seemed so nice of him to carry out the Master's wishes. Roseville Grange is in Inspector Goodenough's district, hence Brother Shoemaker and the rest of our party were merely visitors. Inspector Goodenough did his work in a thorough manner, and I think he will report his findings as being "good enough."

The proceedings were interspersed with a dinner that was simply immense, and which took away our appetite before we made scarcely an impression on the well-filled tables. At a previous meeting during this campaign, I committed the folly of deprecating this feast-making, headache-producing industry of the sisters when they flew at me by saying that the cooks did not complain, and that they thought it a reflection on them by the assertion that the ever-hungry men folk could hardly make an impression

on the good things set before them, intimating thereby that the cooking was at fault. I admire the sisters, and therefore regret their unwillingness to be advised in this matter.

Besides Roseville Grange, which was out in full force, there were representatives present from Sacramento, Enterprise, American River, South Sutter, Tulare and Yuba City Granges. We had two regularly appointed inspectors and several State and county deputies with us, so what one did not know you may be sure another did. Our party coming from the north being desirous to return home on the 3:30 P. M. train, they were necessarily cut off from the after-dinner talks except such as they made themselves, which was a great disappointment to them, inasmuch as they came to listen and to learn from the stars of the south and the center rather than to impart information. However, Bros. Shoemaker and Frisbie did themselves credit as after-dinner talkers, to which the writer responded amen. There were present several of the State's best talkers from whom we expected light and encouragement applicable to these hard times that are so depressing to the tillers of the soil; and it goes without saying that the remaining visitors enjoyed a rare occasion as the words of wisdom fell from the lips of Past Master of the S. G. Daniel Flint and State Lecturer S. Goodenough and of Thomas Waite, Master of Enterprise Grange of Sacramento county. I repeat that the loss was a cruel one and the train should have changed its time if only for once. Fraternally,

GEORGE OHLEYER.

Yuba City, April 19, 1895.

### Tulare Grange.

Tulare Grange held its regular semi-monthly meeting on Saturday, 20th.

After the routine business of the Grange was over, Bro. Premo addressed it on alfalfa, its cultivation, its nutritive value and its value for green manuring.

The soil and climate of Tulare are both admirably adapted for the cultivation of alfalfa. The soil should be well and thoroughly plowed and pulverized before seeding; the implement by which the seed is covered, whether brush, harrow or clod crusher, depends upon the condition of the land. Not less than fifteen pounds of seed per acre should be sown; more is better; less leaves many bare places in the land; the roots, being fewer in the ground, grow larger; the stems also grow thicker. Thicker seeding than fifteen pounds per acre brings a thicker stand, which produces a smaller stem, more foliage, a better quality of hay and less foxtail. The plant will grow vigorously and do well for from four to six years after seeding. When it has passed its vigor it should be plowed up, a growing crop being turned under for green manuring and the land for a period of years cultivated to other crops. In practice it is found in plowing up alfalfa the thin seeded, thick roots are much harder to cut with the plow than the roots of the thick sown ground, the roots in which are smaller. Alfalfa is greatly benefited by a thorough harrowing every year with a heavy harrow.

Bro. Premo recommends every year to sow grain in alfalfa, having the mixture for hay. He usually sows wild oats, screened from wheat volunteered, and gets three crops of alfalfa and oat hay mixed, in the season, besides the pasture. Alfalfa grown on heavy ground with water only a few feet from the surface grows too continuously to mature seed. Lighter lands with water at greater depth matures seed much better. In feeding or pasturing alfalfa, straw or other dry feed should also be fed, to keep the stock from eating the fences, although stock will let alone all fences and posts well whitewashed.

Bro. Premo read from Farmers' Bulletin No. 16, U. S. Department of Agriculture, on the subject of "Legu-

minous Plants for Green Manuring and for Feeding," to show their value for both purposes. The Bulletin is written by Prof. E. W. Allen, who says: "It will be remembered that the principal fertilizers required by plants are nitrogen, potash and phosphoric acid. These are more or less essential to the healthy growth of crops, consequently they are applied to the soil in the form of commercial fertilizers and other manures. \* \* \* Plants with long roots, like clovers, feed deep down in the soil or subsoil on materials beyond the reach of surface feeding plants, and when the tops of these plants are mixed with the surface soil they enrich it much the same as an application of barnyard manure." Leguminous plants, such as clovers, peas, beans, lupines, vetches, etc., draw nitrogen from the air, and phosphoric acid and potash from the soil; hence they draw from the air a material necessary to the growth of crops, and which, in the form of commercial fertilizers, such as nitrate of soda, ammonium sulphate, dried blood, etc., is paid for at the rate of fifteen to twenty cents a pound. The analysis of alfalfa at the Department of Agriculture shows that an acre of it contained over 300 pounds of nitrogen, which at a valuation of fifteen and one-half cents per pound would be worth \$46.50. A comparison in the Bulletin of the value of leguminous plants (of which alfalfa is one of the very best) for food and for fertilizing materials, and also of the common grasses, is greatly in favor of the leguminous plants for both purposes.

The Bulletin summarizes its experiments and in doing so states: "Animals as well as plants require nitrogen for food. \* \* \* Hay from leguminous crops is about twice as rich in protein (nitrogen) as that from grasses. In the one case this protein is obtained very largely from the atmosphere, in the other it is drawn from the fertility of the soil. Leguminous plants yield larger crops of hay to the acre than grasses; hence the production of food materials, especially protein, on an acre is several times larger with leguminous crops."

For the best and most economic effects, however, the crop should be cut and fed, and the manure returned to the soil.

In a discursive consideration of the subject by the Grange after Bro. Premo concluded his address, the allowing of foxtail grass to grow with alfalfa was condemned, although Sister Nelson said that on her farm she considered foxtail an advantage, as it came three weeks earlier than alfalfa, thus furnishing the stock with green feed that much sooner.

The Lecturer read from Bro. Amos Adams' report, in the RURAL PRESS, of Bro. E. F. Adams' address at San Jose Grange on the 13th, on the objects of the Order, where they have been attained, and how they can be attained in California; also on the possible educational effect of summer encampments, both of which subjects being heartily approved of by this Grange. Bro. Adams has struck a chord which brings a responsive note from every earnest Patron.

At the next meeting of the Grange Bro. Zumwalt will address the members on "Dairying."

The Grange being informed that the Farmers' Institute organization of this the 3rd Agricultural District is out of funds with which to hold another Institute this year, it was resolved to hold a Grange Farmers' Institute about the middle or last of next October.

J. T.

### San Jose Grange.

At its regular meeting on the 20th inst., San Jose Grange took up a matter of great practical interest, especially to the people of fruit-producing sections of the State. Attention was called by Messrs. Lillick, Tarleton, Howard and others of the Grange to the fact that preserved fruits and jellies of well-known brands from England are daily being sold in large quan-

(Continued on page 268.)

WHAT WE  
SAY WE DO  
WE DO DO

"He had an honest look."  
You've heard of him.  
Perhaps you've seen him.  
Possibly you've dealt with him.  
And you're sorry for it now.  
Still you've learned something.  
You're never going to forget what it was that caught you.  
It was *that honest look*.  
In buying your harvesting machinery don't put too much confidence in an honest look.

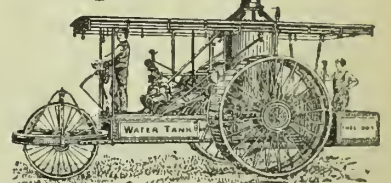
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light-running steel binders and mowers not only have the honest look, but they have something better—reputation—character. This they have earned by long years of public service. There's stability in the very name "McCormick" and machines having that name can not be sold as cheaply as others, because they have other and more intrinsic value than "an honest look."

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SAY WE DO  
WE DO DO

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## San Jose Grange.

(Continued from page 267.)

titles in San Jose, as well as elsewhere throughout California and the East, at prices far in excess of anything that can be realized for goods of the same and even better quality that are put up here. This fact is the more to be deplored from the fact that the trade secured by the foreign packers is the very best and most profitable. The goods are sold to the most wealthy people and those who do not care anything about price so long as they can get what is choice, or is supposed to be choice, and if these classes could be made to understand that Santa Clara county jellies, jams, marmalades, preserved fruits, etc., were just as palatable and desirable in every way as the foreign importations, one of the best points ever made in favor of the Santa Clara county fruit-growers would be secured. A most extensive and profitable market would be opened up throughout the country, and there is no reason why in time the California preserved fruits should not invade and compete with the foreign goods in their own market, just as they are to-day securing a most profitable trade in our market with their product.

The extent of the trade in fancy foreign fruit preserves in this country can scarcely be realized except by the dealers, who say it is enormous, in fact amounting to many million dollars yearly, with profits enormously in excess of the same amount of trade in the cheaper qualities of goods.

A committee consisting of W. F. Lillick and M. J. Tarleton was, on motion, appointed to make a thorough investigation of the subject, to report the matter to San Jose Grange in the form of a paper. It is desired as soon as possible to take some definite steps in the direction of securing the fancy preserved fruit trade for California growers. It is desired to investigate as to the methods of foreign packers in the way of preserving and labeling their goods tastefully in glassware, etc. The fact is realized that as much or more depends upon the way the goods are placed upon the market than even upon their quality and palatability, and advantage will be taken of the results of the long experience of English packers in this direction.

There was also an extended discussion on the question of the formation of sanitary districts, as provided for by recent acts of the Legislature. It was unanimously agreed that the law is a good one, and will give rural districts especially an advantage that could not otherwise be attained. It was the desire of members of the Grange residing in that neighborhood to establish a sanitary district to include the Willows, a portion of Union school district and to extend in the direction but not to include Almaden.

The provision made by the last Legislature giving the officers of the sanitary district power to regulate the liquor business was discussed. It was pointed out that the proposed district in the Willows and to the south of that point includes one of the finest fruit sections in the Santa Clara valley or the State. There are very few saloons in this district—three at the very most. On motion, a committee from the Grange, consisting of Judge Amos Adams, Webb and Sampson, consulted the District Attorney in the matter of the proper procedure to form the proposed sanitary district.

The San Jose Mercury, in its issue of the day following the Grange meeting, commented upon the proceedings as follows:

San Jose Grange has taken the initiative in an endeavor to bring about a change. Instead of importing jams, we should be exporting them. At all events, we should supply the home and the Eastern demand, and the Grange will work to bring that desirable state of affairs about. The first essential step is to acquire all possible information concerning the business, and a committee has been appointed to investigate the subject thoroughly. It will endeavor to learn the methods of foreign packers, their process of preserving and their way of labeling, and it will report to the Grange.

The Mercury believes this to be the most important movement yet made toward the establishment of home industries. There ap-

pears to be no reason why California should not control the markets of the United States in this branch of the fruit business. As was stated at the Grange meeting Saturday, "the foreign goods are sold to the most wealthy people and those who do not care anything about price so long as they get what is choice, or is supposed to be choice, and if these classes could be made to understand that Santa Clara county jellies, jams, marmalades, preserved fruits, etc., were just as palatable and desirable in every way as the foreign importations, one of the best points ever made in favor of the Santa Clara county fruit-growers would be secured. A most extensive and profitable market would be opened up throughout the country, and there is no reason why in time the California preserved fruits should not invade and compete with the foreign goods in their own market, just as they are to-day securing a most profitable trade in our market with their product."

## List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey &amp; Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING APRIL 9, 1895.

- 537,037.—TUBE TESTER—T. W. Heintzelman, Sacramento, Cal.  
 537,038.—SAFETY VALVE—T. W. Heintzelman, Sacramento, Cal.  
 537,153.—SAFETY HOLDER—L. A. Heintzelman, Monte Cristo, Wash.  
 537,291.—GAS BURNER REGULATOR—J. Kraker, S. F.  
 537,162.—CAN—John Lee, San Mateo, Cal.  
 537,346.—CONNECTING ROD—F. F. Maag, Beaumont, Cal.  
 537,056.—HOP PICKER—M. Marsa, North Yakima, Wash.  
 537,300.—STATION INDICATOR—Murray & Krasky, S. F.  
 537,313.—PRESERVING FRUIT—A. D. Shepard, S. F.  
 537,314.—RIVETING MACHINE—J. I. Smith, Chico, Cal.  
 537,082.—TAPE MEASURE—C. Stuart, Turlock, Cal.  
 537,257.—GOLD SAVING APPARATUS—B. M. Whitling, Spokane, Wash.  
 24,176.—BADGE DESIGN—C. G. Tingry, Portland, Or.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible by mail or telegraphic order. American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

—The cradle in which the big lumber raft is building at Stella, Wash., by Messrs. Robinson & Baines, is finished. Most of the piles of which the raft is to be constructed will be floated down the Cowlitz river. The steamer Alice Blanchard brought up from this city thirty tons of massive chains that will be used in binding the thousands of piles together, though it will take thirty additional tons of chains to complete the job. To avoid a disaster such as occurred to the raft towed out of the Columbia last fall, the builders are having a strong hulkhead put in each end of the raft. Instead of using a tug, this raft will be towed here by a large ocean steamer. The last raft, which went to pieces off the mouth of the Columbia, contained 10,000 piles, and the raft was over 400 feet in length. The builders and owners of the second raft propose to profit by their costly experiment.

## Deafness Cannot be Cured

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure Deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When the tube gets inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

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—The Stockton Car, Agricultural and Machine Works is shipping two harvesters to the Argentine Republic, the pioneer harvesters to enter that South American country. Five more of the machines will be constructed and sent to Argentine if these two prove successful, as they probably will. Two experts will be sent with the machines to properly start them to work.

—The Southern California Railway has one passenger, one freight and two switch engines running burning oil as a fuel successfully. The engine in the passenger service makes 190 miles and averages eighty stops daily. They have several engines which are about completed as oil burners, besides several others well under way which are to burn oil as fuel.

FOR COUGHS, ASTHMA AND THROAT DISORDERS, use "Brown's Bronchial Trochoc." Sold only in boxes. Avoid imitations.

—A large force of men is at work on the Rio Verde, Arizona, canal and storage reservoir. The entire work will cost \$2,000,000, and is to be finished in three years.

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The largest crop and best grade of fruit can only be obtained by using fertilizers containing

Not Less than 12% Actual Potash. (K<sub>2</sub>O)

This is equally true of pine-apples and other tropical fruits.

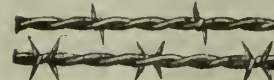
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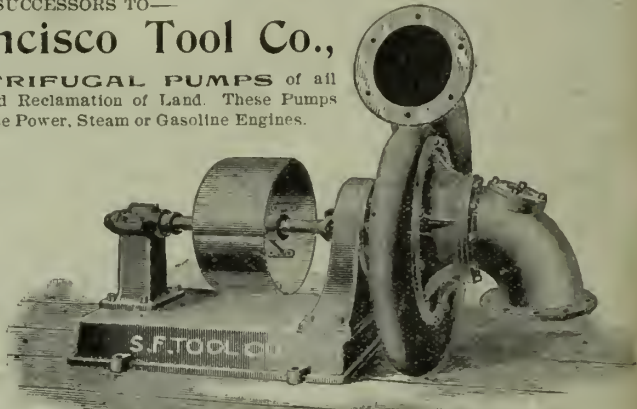
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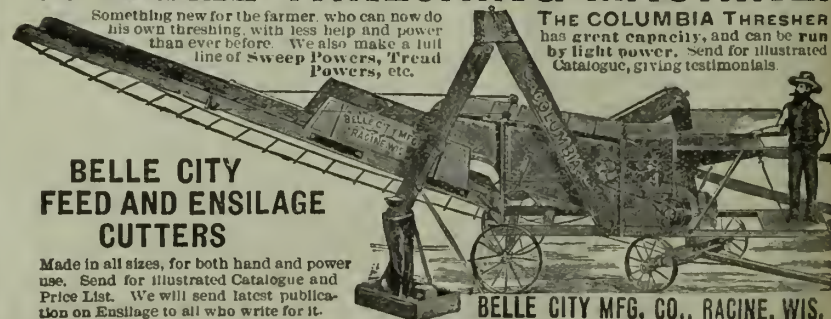
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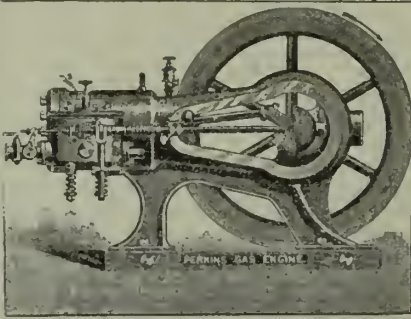
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S. F. MARKET REPORT.

Market Review.

SAN FRANCISCO, April 24, 1895.

**FLOUR**—Receipts have been quite free of late, but prices keep steady, trade being good. Liberal shipments were made to China by yesterday's outgoing steamer. We quote: Net cash prices for Family Extras, \$3 25@3 35 ¢ bbl; Bakers' Extras, \$3 15@3 25; Superfine, \$2 10@2 35 ¢ bbl.

**WHEAT**—The promising outlook which developed at the opening of this week has been dissipated, both the English and Chicago markets having relapsed. Local freights are somewhat firm, and this circumstance is an important factor in keeping quotations easy for spot wheat. There has been considerable activity in speculative circles within a few days, causing more or less strengthening of values in options for May and December, which, however, was only temporary, as prices yesterday were practically the same as a week ago. Shippers are paying 87½¢ ¢ cwt. for No. 1 quality and 88½¢ for choice, the demand not being urgent. Milling grades are quotable at 90¢ @95¢ ¢ cwt.

**BARLEY**—While the sample market does not present an appearance of great activity, there is still a fair volume of trade in progress. Exporters are quietly picking up desirable offerings, low prices being an incentive for business in this direction. Within a week 2400 tons went to England, while a vessel for New York carried away 450 tons. Trade of this character materially helps the situation. Values remain stationary. We quote: Feed, fair to good, 65¢@71¢; choice, 68½¢; Brewing, 80¢@87½¢ ¢ cwt.

**OATS**—Choice descriptions are none too plentiful and quotations for such goods are somewhat steady, the advantage being on the side of sellers. Common grades, on the contrary, are plentiful and weak. We quote as follows: Milling, 11 07½¢@1 17½¢; Surprise, 11 07½¢@1 17½¢; fancy feed, 11 03½¢@1 07½¢; good to choice, 95¢@1; fair to good, 90¢@95¢; poor to fair, 85¢@87½¢; Black, nominal; Gray, 95¢@1 02½¢ ¢ cwt.

**CORN**—Small Yellow of sound quality is scarce and firmly held. Large Yellow shows a wider margin in quotations, there being more or less stock of indifferent quality among the offerings. We quote: Large Yellow, \$1 @1 15; small Yellow, \$1 15@1 25; White, \$1 10@1 15 ¢ cwt.

**RYE**—Quotable at 83½¢@85¢ ¢ cwt.

**BUCKWHEAT**—Quotable at 80¢@85¢ ¢ cwt.

**OILCAKE MEAL**—Quotable at \$25 ¢ ton from the mill.

**COTTONSEED OILCAKE**—Quotable at \$24 ¢ ton.

**MIDDLINGS**—Quotable at \$18@19 ¢ ton.

**HAY**—Sellers are at a disadvantage. Receipts are in excess of the demand and the tone of the market is very soft. Thomas' Produce Report says: "Hay prospects are not bright. Stocks are quite heavy and volunteer fields are now about ready to cut down for hay, which will bring some new to this market about the first of May, if they ship it right in. These conditions are taken into consideration by the trade and a dull condition of the whole market is the result." We quote: Wheat, \$8@11; Wheat and Oat, \$8@11; Oat, \$8@10 50; Alfalfa, \$6 50@8 50; Barley, \$7@8 50; Clover, \$7@8; Compressed, \$8@10 50; Stock, \$6@7 ¢ ton.

**STRAW**—Quotable at 50¢@70¢ ¢ bale.

**FEED**—Manhattan Horse Food (Red Ball Brand) in 100-lb. cabinets, \$8; Manhattan Egg Food, 100-lb. bags, \$11 50.

**BEANS**—The situation is not quite as encouraging to holders as it was a short while ago. Quotations for Pea and small Whites have been lowered. Pinkies are also easy. Large Whites are in light offering. We quote as follows: Bayos, \$1 50@1 80; Butter, \$2@2 25 for small and \$2 25@2 50 for large; Pink, \$1 40@1 65; Red, \$1 60@1 70; Lima, \$4 50@4 70; Pea, \$2 65@2 85; Small White, \$2 65@2 85; Large White, \$2 60@2 80; Blackeye, \$3@3 50; Red Kidney, \$2 75@3; Horse, \$1 60@1 70 ¢ cwt.

**SEEDS**—The season is too far advanced for any active demand to prevail. Prices easy. Mustard, Brown, \$1 25@1 75; Yellow, \$1 75@2; Tiesie, \$1 50@1 75; Canary, \$3@4; Hemp, \$3@3½; Rape, 1¼@2¼¢; Timothy, 5¼@6¼¢; Alfalfa, 7¼@7¾¢ ¢ cwt; Flax, \$2@2 50 ¢ cwt.

**POTATOES**—Receipts of new continue to increase, the arrivals yesterday footing up 427 sacks. All descriptions are in good demand. We quote as follows: New, ¼@1¼¢ ¢ lb; Early Rose, 30¢@40¢; River Reds, 25¢@30¢; Burbanks, 40¢@50¢; Oregon Burbanks, 40¢@55¢ ¢ cwt.

**ONIONS**—Choice stock steady. Poor qualities weak. We quote: Good to choice California, 65¢@1; cut, 25¢@50¢ ¢ cwt; Oregon, \$1@1 25.

**VARIOUS**—Asparagus continues to decline under free receipts. Some few sales of fancy stock are made above quoted figures. Rhubarb sells at about any price that buyers choose to pay. Prices of both String Beans and Green Peas are weak, the market favoring consumers. We quote as follows: Cucumbers, 50¢@75¢ ¢ doz; Asparagus, 40¢@75¢ ¢ box for the general run and \$1@1 25 for choice; Rhubarb, 25¢@50¢ ¢ box; String Beans, 5¢@7¢ ¢ lb; Green Peas, 2¢@3¢ ¢ lb for good to choice; Turnips, 50¢ ¢ cwt; Beets, 60¢@75¢ ¢ sack; Carrots, 30¢@50¢; Cabbage, 75¢@85¢ ¢ cwt; Garlic, 10¢@12¢ ¢ lb; Cauliflower, 75¢@85¢ ¢ doz; Dried Peppers, 11¢@12¢ ¢ lb; Dried Okra, 15¢ ¢ lb.

**FRESH FRUIT**—Apples—Quotable at 50¢@1 15 for common to choice, with \$2@2 50 for fancy. Berries—Gooseberries, 65¢@75¢ ¢ drawer; Strawberries, Sharpless, \$5@7 ¢ chest; Longworth, \$7@10.

Cherries—Quotable at \$1 50@2 75 ¢ box, the latter for Purple Guignes, being the first this season.

**CITRUS FRUIT**—Fancy navel Oranges are in request at firm prices. Mexican Limes are plentiful and cheap. We quote: California Navels, \$1 25@2 75; Seedlings, 75¢@1 25 ¢ box; Mexican Limes, \$3 50@4 ¢ box; Lemons, Sicily, \$3@4; California Lemons, 75¢@1 50 for common and \$1 75@2 for good to choice.

**DRIED FRUIT**—There is not much doing either on local account or in a shipping way. Much stock is said to have gone East on consignment and about all wants in that direction are supplied from such sources. Of choice Apricots and Peaches the offerings are small, stocks consisting mostly of low grades. Moderate demand reported for Prunes. Receipts of Pears and evaporated Apples are more than enough to satisfy present trade wants.

Following are the prices furnished by the Fruit Exchange. The figures presented represent carload lots, smaller parcels occasionally selling at slightly lower rates:

Apricots—Fancy Moorpark, 8¢; choice, do, 7½¢; fancy, 7¢; choice, 6¢; standard, 5½¢; prime, 5¢. Apples—Evaporated, 5¼¢@6¢; sun-dried, 4¢@5¢. Peaches—Fancy, 7¢; choice, 6¼¢; standard, 5½¢; prime, 5¼¢; peeled, in boxes, 12¢@13¢. Pears—Fancy, halves, 5¼¢; quarters, 4¼¢; choice, 4¼¢; standard, 3¼¢; prime, 3¢. Plums—Pitted, 4¢@5¢; unpitted, 1¼¢@2¢. Prunes—Four sizes, 4¼¢@4½¢. Neotaries—Fancy, 7¢; choice, 6¢; standard, 5¢; prime, 5¼¢.

Figs—White, choice, 4¢@5¢; black, choice, 2½¢@3¢. Dried Grapes—1½¢ ¢ lb. Raisins—In sacks (50-lb. boxes selling at ¼¢ ¢ lb. higher): 4-crown, loose, 4¢; 3-crown, 2½¢; 2-crown, 2¢; seedless Sultanias, 3¢; seedless Muscatels, 2¢ ¢ lb; 3-crown London Layers, \$1 40 ¢ box in 20-lb. boxes; clusters, \$2; Dehesa clusters, \$2 50; Imperial clusters, \$3; 4-crown, loose, \$1; 4-crown, loose, faced, \$1 15 ¢ box.

**NUTS**—Trade continues of light volume. Chestnuts, 6¢@7¢; Walnuts, 6¢@7¢ for hard shell, 7¢@9½¢ for soft shell and 7¢@9½¢ for paper shell; California Almonds, 5¢@6¢ for soft shell, 2¢@2½¢ for hard shell and — for paper shell; Peanuts, 4¢@6¢; Hickory Nuts, 5¢@6¢; Filberts, 8¢@9¢; Pecans, 6¢ for rough and 8¢ for polished; Brazil Nuts, 7¢@7½¢ ¢ lb; Cocoanuts, \$4 50@5 50 ¢ 100.

**HONEY**—Prices lack firmness, in spite of light stocks. Crop prospects continue favorable, thus checking any buoyant feeling in values. We quote: Comb, 9¢@11¢; water white, extracted, 6½¢@7¢; light amber, extracted, 5½¢@6¢; dark amber, 5¢@5½¢ ¢ lb.

**BEESWAX**—Quotable at 26¢@28¢ ¢ lb.

**BUTTER**—Prices show no improvement. Local trade keeps brisk, while there is good shipping demand, though not large enough to absorb the surplus.

Creamery—Fancy, 12½¢@13¢; seconds, 11¢@12¢ ¢ lb. Dairy—Fancy, 10½¢@11¢; fair to choice, 8¢@10¢; store lots, 6¢@7¢.

**CHEESE**—Increasing receipts have caused further lowering of prices. We quote: Choice to fancy, 6¢@7¢; fair to good, 4½¢@5½¢; Eastern, ordinary to fine, 10¢@14¢ ¢ lb.

**EGGS**—Store lots have again declined, while ranch parcels are anything but steady. Quotable at 10¢@11¢ ¢ dozen for store and 12¢@13¢ for ranch.

**POULTRY**—The market is in fairly good shape for sellers, supplies not being excessive. Young stock is somewhat firm at quoted figures. We quote: Live Turkeys—Gobblers, 10¢@11¢; Hens, 11¢@13¢ ¢ lb; Roosters, \$1@1 50 for old, and \$7@9 for young; Broilers, \$3@4 50 for small and \$6@7 for large; Fryers, \$6@7; Hens, \$4 50@5 50; Ducks, \$4@5 50 for old and \$7@8 50 for young; Geese, \$1 25@1 50 ¢ pair; Goslings, \$2@2 50; Pigeons, \$1 50@2 25 ¢ dozen.

**WOOL**—The better grades of Wool continue in active demand, all such stock finding prompt sale at current figures. Poor and faulty descriptions drag along at easy prices, with not much prospect for improvement in trade or values.

We quote spring: Year's fleece, San Joaquin, ¼ lb. 4¢@6¢ 6 to 8 months do 4¢@8¢ 6 to 8 months Calaveras and foothill, free 7¢@9¢ Do, defective 4¢@6¢

We quote fall: Mountain, free 4½¢@6¢ Plains, defective 3¢@4½¢ We quote Nevada spring: Light and choice 8½¢@10¢ Heavy 6¢@7¢

We quote Oregon spring: Eastern, choice 8¢@10¢ Do, poor 6¢@7¢ Valley, choice 9¢@11¢ Do, low grade 8¢@10¢

**HOPS**—The market remains inactive at nominal prices. An auction sale of 70,000 lbs. is announced to take place at Watsonville, on the 27th inst. Quotable at 5¢@7½¢ ¢ lb.

**HIDES AND SKINS**—Quotable as follows:

|                                                                                                                                                                                                                                                                                                                                                                                                       | Sound. | Culls. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|
| Heavy Steers, 56 lbs up, ¼ lb...                                                                                                                                                                                                                                                                                                                                                                      | 7½¢    | 6¢@6½¢ |
| Medium Steers, 48 to 56 lbs...                                                                                                                                                                                                                                                                                                                                                                        | 6¢     | 5¢@5½¢ |
| Light, 42 to 47 pounds...                                                                                                                                                                                                                                                                                                                                                                             | 6¢     | 5¢@5½¢ |
| Cows, over 50 lbs...                                                                                                                                                                                                                                                                                                                                                                                  | 6¢     | 5¢@5½¢ |
| Light Cows, 30 to 50 lbs...                                                                                                                                                                                                                                                                                                                                                                           | 6¢     | 5¢@5½¢ |
| Stags...                                                                                                                                                                                                                                                                                                                                                                                              | 3½¢@   | 2½¢@3  |
| Kips, 17 to 30 lbs...                                                                                                                                                                                                                                                                                                                                                                                 | 4½¢@5  | 3¢@4   |
| Veal Skins, 10 to 17 lbs...                                                                                                                                                                                                                                                                                                                                                                           | 6¢     | 4½¢@5  |
| Calf skins, 5 to 10 lbs...                                                                                                                                                                                                                                                                                                                                                                            | 7¢     | 6¢@6½¢ |
| Dry Hides, usual selection, 10¼¢@11¢; Dry Kips, 9¢; Calf Skins do, 12¢@13¢; Cull Hides, Kip and Calf, 7¢@8¢; Pelts, Shearings, 10¢@20¢ each; do, short, 25¢@35¢ each; do, medium, 30¢@45¢ each; do, long wool, 40¢@60¢ each; Deer Skins, summer, 30¢; do, good medium, 15¢@25¢; do, winter, 10¢@150 ¢ lb; Goat Skins, 30¢@35¢ apiece for prime to perfect, 10¢@20¢ for damaged, and 5¢ each for Kids. |        |        |

PRESSES FOR BAILING HIDES, HAY, HOPS, WOOL. WRITE FOR PRICES AND CATALOGUE. I. J. TRUMAN 236 BUSH ST. MILLS, CALIF. SAN FRANCISCO

COOPER'S SHEEP DIPPING POWDER. THE POWDER IN THIS CASE IS SUFFICIENT FOR 1000 GALLONS DIP. 4085 SAN FRANCISCO. WEIGHT 100 LBS. MEASURE 1 1/2 FT.

SURE CURE FOR SCAB. PRICE, \$16 PER CASE.

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SHOOBERT, BEALE & CO.,

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FREE Weekly, \$1 a year. 7 Editors.

160-page Bee-Book Free!

All about Bees and Honey

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F. H. BURKE, 626 Market St., S. F. Al Prize Horses; Grade Milch Cows. Fine Pigs.

REGISTERED JERSEYS.—Sulphur Spring Farm, Niles, Cal.

BULLS—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

JERSEYS—The best A. J. C. C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale.

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M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

PETER SANE & SON, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

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BARRIED P. ROCKS, Brown Leghorns, Black Minorcas and Mammoth Pekin Ducks. In these varieties I have taken great pains in securing the best prize winners in New York and Mass.; besides, I have won highest honors at the State shows. I invite every one interested to visit my ranch and see America's best bred fowls. Reference to People's Bank, or any of my neighbors, Santa Cruz, Cal. J. W. Forgens. Eggs, \$2 per setting, or three settings for \$5.

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EGGS FOR HATCHING.—Buff, Brown and White Leghorns, Plymouth Rocks, White Wyandottes, Silver Wyandottes, Light Brahmas, Indian Games, Black Spanish, Bantams, Pekin Ducks—Two Dollars setting; Mammoth Bronze Turkey, White Holland Turkey—Three Dollars dozen, Theodore Cushing, Spokane, Washington.

C. NISSON, Petaluma. Brown Leghorns. Fowls and eggs at all seasons in any quantity. Circular free. "Nisson on Incubation," 25 cts.

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CALIFORNIA POULTRY FARM, Stockton, Cal. Send for illustrated and descriptive catalogue, free.

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Sheep and Goats.

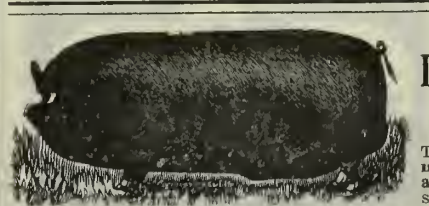
J. B. HOYT, Bird's Landing, Cal. Importer and Breeder of Shropshire Sheep; also breeds Cross-bred Merino and Shropshire Sheep. Rams for sale. Prices to suit the times. Correspondence solicited.

J. H. GLIDE, Sacramento. Very large choice Spanish, French and Shropshire rams. Bedrock prices.

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RAISED FROM IMPORTED STOCK, for sale by V. GIANELLA, Honcut, Butte county, Cal.



MANHATTAN STOCK FOOD

Feed our Poultry Food and you will have healthy chickens and lots of eggs. Ask your dealer for it.

DEWEY & CO., PATENT SOLICITORS.

220 Market St., San Francisco, Cal.

POULTRY KEEPERS CAN YOU AFFORD TO PASS THIS BY? SEND YOUR NAME & ADDRESS ON POSTAL CARD TO LE GRAND POULTRY RANCH, WEST RIVERSIDE, CALIFORNIA. THEY WILL SEND YOU SOMETHING USEFUL BY DECEMBER 15th NEXT. SCW LEGRANDS



In These Dull Times

You Can Largely Increase

Your income by buying an Incubator and engaging in the chicken business. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember the Best is the Cheapest. PACIFIC INCUBATOR CO., 1317 Castro St., Oakland, Cal.

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S. C. White Leghorns, S. C. Brown Leghorns, Barred Plymouth Rocks, Black Minorcas.

Eggs, \$3 per 13. Send for Circular.



THE HALSTED + INCUBATOR COMPANY,

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HATCH CHICKENS BY STEAM WITH THE MODEL EXCELSIOR INCUBATOR. Thousands in Successful Operation. SIMPLE, PERFECT and GUARANTEED. Guaranteed to hatch a larger percentage of fertile eggs, at less cost, than any other incubator. Send for our Circular. GEO. H. STAHL, 114 to 122 S. 6th St., Quincy, Ill.

INCUBATORS Self-Regulating BROODERS.

Most Perfect Machines, Best Material and Workmanship. Lowest in Price. Our Thermo-Regulator is as accurate as a Thermometer. Send for large illus. Catalogue. Tells all about it. High Class Poultry and Eggs. Headquarters for Poultry Supplies. PEERLESS INCUBATOR AND BROODER CO., Quincy, Ill.

Short-Horn Bulls OF MILKING STRAINS.

CALVES, YEARLINGS AND TWO-YEAR-OLDS.

ROBERT ASHBURNER,

Baden Station, San Mateo Co., Cal.

The cars of the S. F. and San Mateo Electric Road pass the place.

SHORT HORN BULLS FOR SALE.

A choice lot of the very best strains from one to five years of age.

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LARGE SALES Sold 1673 O. I. C. HOGS IN 1894. Send for description of THIS FAMOUS BREED, two of which weighed 2506 lbs. First applicant in each locality can have a pair on time and agency. Express rates accompany the description. THE L. B. SILVER CO., CLEVELAND, O.



EGG RECIPE.

Take one postal card, write on its back, "How can I make larger profits on the egg crop?" Direct it to H. K. STARKWEATHER, 310 California St., San Francisco. Drop in postoffice and await prompt answer.

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SESSIONS & CO.,

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P. O. Box 686, Los Angeles, Ca.

We have Berkshires of the most fashionable strains. They are from Prize Winners and are Prize Winners themselves. We have litters old enough to ship, also a few young boars 8 to 10 months old that we will sell at low prices. Correspondence solicited

Genuine only with RED BALL brand. Recommended by Goldsmith, Marvin, Gamble, Wells, Fargo & Co., etc., etc. It keeps Horses and Cattle healthy. Formilch cows; it increases and enriches their milk. Manhattan Food Co., San Mateo, Cal.

Ask your dealer for it.







### The Manufacture Of Wild Men.

There are many curious trades in the world, but the most strange must surely be the "artificial manufacture of wild men." Yet a well-known English doctor in China has just certified from his own personal experience that this art is regularly practiced in the Flowery Kingdom.

First a youth is kidnapped, then bit by bit he is flayed alive, and the skin of a dog or bear grafted piece by piece upon him. His vocal chords are next destroyed by the action of charcoal to make him dumb, and the double purpose of causing "etiolation" of the skin and utter degradation of the mental faculties is effected by keeping him immured in a perfectly dark hole for a number of years. In fact, by treating him like brute for a sufficiently long time he is made into one.

At last he is exhibited to the entirely credulous Chinese as a wild man of the woods, and his possessors reap a rich harvest.

The priests, it seems, are adepts at the art. When a kidnapper, however, is caught by the people he is torn to pieces, and when the authorities get him they torture him and promptly behead him. Such is life under the rule of the Son of Heaven.

### A Novel Calculation.

According to M. Eiffel, the cost of lives of any great engineering work can be estimated, at least as accurately as the cost in money. "It has been found," he says, "by statistical observation that in engineering enterprises one man is killed for every 1,000,000 francs spent on the work. If you have to build a bridge at a cost of 100,000,000 francs, you know that you will kill 100 workmen." This statement, while rather an ingenious one, is not, it is stated, borne out by facts. Take the Eiffel tower, for example. Six and a half millions' worth cost only four lives. The Forth bridge, on the other hand, a contemporary points out, cost 45,000,000 francs, while the lives of fifty-five men were sacrificed in connection with its construction.

### Improvements in Printing Machinery.

The American Sunday newspaper is the wonder of the Old World, and it would almost seem as if the enormous editions issued by some offices for the delectation of their Sunday readers had exhausted the possibilities of modern newspaper production. That such, however, is not the case, is evident from the constant succession of patents being taken out for improvement in newspaper printing machinery. The ingenuity and complication of some of these machines is remarkable. The specification of a machine for feeding sheets of paper to a printing press, occupied nearly eight pages of a recent number of the Patent Office Gazette, and contained not less than sixty-nine distinct claims.

### Horse Owners! Try GOMBAULT'S Caustic Balsam

A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland O.

### FERTILIZERS!

WESTERN FERTILIZER & CHEMICAL WORKS, Successors to Mex. Phosphate and Sulph. Co. and H. M. Newhall & Co. REDUCED PRICES. SEND FOR CIRCULAR. 309 Sansome Street, San Francisco.

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A SMALL FARM ON MOST favorable terms, address S. C. TRAYNER, Marysville, California.

### Seeds, Plants, Etc.

## OLIVE TREES.

MISSION, MANZANILLO, NEVADILLO, RUBRA, COLUMELLA, PICHOLINE, REGALIS AND UVARIA.

LUELLING ALMONDS, JAPANESE WINEBERRIES, EVERGREEN BLACKBERRIES.

A Complete Assortment of FRUIT and ORNAMENTAL TREES.

ROSES, PALMS, MAGNOLIAS, ETC. VEGETABLE, FLOWER and FARM SEEDS! SEEDS!

Descriptive Catalogue and prices on application.

TRUMBULL & BEEBE,

Seedsman and Nurserymen, 419-421 Sansome Street, San Francisco, Cal.

TREES of GOLD plum, SPLENDOR prime, Van DEMAN quince—choice of Burbank's 20 Million "new creations." STARK TREES PREPAID everywhere. SAFE ARRIVAL guaranteed. The "great nurseries" save you over HALF. Millions of the best trees 70 years' experience can grow; they "live longer and bear better." Sec. Morton, STARK, B-14, Louisiana, Mo., Rockport, Ill.

## ALEXANDER & HAMMON,

RIO BONITO NURSERIES, Biggs, Butte Co., Cal.

### DECIDUOUS FRUIT TREES

OUR SPECIALTY.

The most Complete Assortment of General Nursery Stock grown on the Pacific Coast

1,000,000 Trees for the Season of 1894-95 in Stock.

Acknowledged everywhere to be equal to the best. Guaranteed to be healthy and free from scale or other pests.

Send for Catalogue and Prices. Correspondence solicited. Address:

Alexander & Hammon,

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ESTABLISHED 1853.

## Stockton Nursery.

Get our Catalogue and Prices before purchasing your Trees or Anything in the Nursery Line.

Clean, Thrifty, Healthy Stock at Prices to Suit the Times.

E. C. Clowes, Stockton California.

## PRINTERS' INK

For Tree Pests.

Put up in packages to suit at 8 cents per pound.

Directions.—Place a band of stout paper around trunk of tree and smear freely with ink.

CALIFORNIA INK COMPANY, 415 Sacramento Street, San Francisco.

## "INDURINE" COLD WATER PAINTS.

A Most Remarkable Material is the OUTSIDE INDURINE.

It stands rain and exposure as well as oil paint and costs only a fraction as much.

It is just the thing for fences, outbuildings, factories, etc., being cheap, durable and easily applied by anyone.

It has no equal as a light reflector for light-shafts and court yards of large buildings. It is supplied in a thick paste, to be diluted with cold water. It is made in white and several colors.

INSIDE INDURINE

Is designed especially for factories, stables, and general inside work, as a substitute for white wash, kalsomine or oil paint.

It will not rub or scale, soften or darken with age, and works well over old whitewash. A dry powder to be mixed with cold water.

Both Indurines are perfectly fire-proof.

Send for circular and prices to

WM. BURD, MANUFACTURER, Mills Building, San Francisco, Cal.

## LIGHTNING WELL MACHINERY Works.

All kinds of tools. Fortune for the driller by using our Adamantine process; can take a core. Perfected Economical Artesian Pumping Riser to work by Steam, Air, etc. Let us help you. THE AMERICAN WELL WORKS, Aurora, Ill.; Chicago, Ill.; Dallas, Tex.

## Olive Trees.

ALL KINDS OF NURSERY STOCK. Send for our Book on Olive Culture.

Howland Bros., POMONA, CAL.

## Olive Trees for Sale

GEO. H. KUNZ, Sacramento.

Mission, 3 years. . . . . 5 to 6 feet.  
Mission, 2 years. . . . . 3 to 4 feet.  
Manzanillo, 2 years. . . . . 2 to 3 feet.  
Nevadillo, 2 and 3 years. . . . . 4 to 6 feet.  
Picholine, 2 years. . . . . 2 to 3 feet.

### PALESTINE CORN

Is hard to beat. Can be planted till June. Yields about 2,000 lbs. corn and 12 tons excellent fodder per acre on dry land. Can be harvested with combined harvester. Send \$1 per acre for seed desired. Address: SACRAMENTO RIVER NURSERY CO., WALNUT GROVE, CALIF.

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A FINE ASSORTMENT, best varieties, free from pests of any kind. Prunus Simoni, Bing, Rostraver and Mardoch Cherries; Black California Figs; Rice Soft Shell and other Almonds; American Sweet Chestnuts; Præparatus Walnuts. Hardy mountain grown Orange Trees. Our oranges have stood 22 degrees this winter without injury. Dollar Strawberry, the best berry for home use or market. Address C. M. SILVA & SON, Lincoln, Placer County California.

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Trade Mark—Dr. A. Owen

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The latest and only scientific and practical Electric Belt made, for general use, producing a genuine current of Electricity, for the cure of disease, that can be readily felt and regulated both in quantity and power, and applied to any part of the body. It can be worn at any time during working hours or sleep, and

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Electricity, properly applied, is fast taking the place of drugs for all Nervous, Rheumatic, Kidney and Urinal Troubles, and will effect cures in seemingly hopeless cases where every other known means has failed.

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MENTION THIS PAPER.

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220 Market St., San Francisco.

GEO. H. STRONG, Manager.

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## GRANGERS' BANK

OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED.....APRIL, 1874



Capital Paid Up.....\$1,000,000  
Reserve Fund and Undivided Profits, 130,000  
Dividends Paid to Stockholders.... 832,000

### OFFICERS—

A. D. LOGAN.....President.  
I. C. STEELE.....Vice-President.  
ALBERT MONTPELLIER.....Cashier and Manager.  
FRANK McMULLEN.....Secretary.

General Banking. Deposits Received. Gold and Silver. Bills of Exchange Bought and Sold. Loans on Wheat and Country Produce a Specialty.  
January 1, 1894. A. MONTPELLIER, Manager.



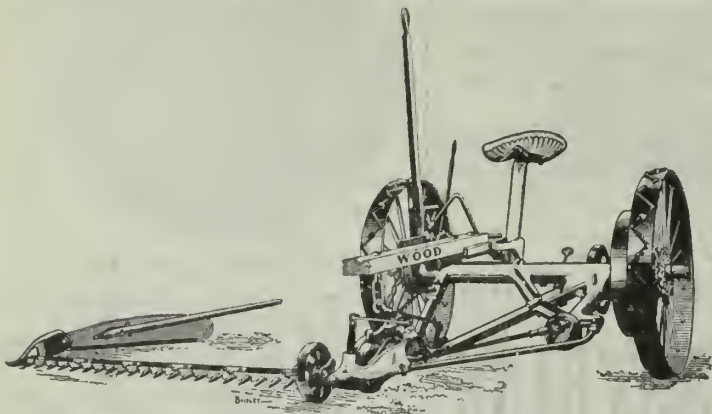
## This Machine Don't Clog.

It has often been said that the character of a man is known by the company he keeps, and it is just as true that the quality of creamery butter can be told by the machinery that makes it. A man with no cream separator in his dairy or creamery, too often makes butter with as many distinct odors as a city sewer contains. The reverse of this proposition is also so true that cheesemakers are recognizing the cleansing power of the RUSSIAN SEPARATOR, and it has been introduced in many factories making high grade full cream cheese merely to cleanse the milk. The reason the RUSSIAN is preferred is that it does not clog up so readily with dirt as other machines, and it is much simpler and easier to run. The bowl alone revolves, and the spare parts that need renewing cost but little and are easily put in place. It is made in creamery and dairy sizes --for five cows or for five hundred. Send for circulars to P. M. SHARPLES, West Chester, Pa., Elgin, Ill., or Rutland, Vermont.

## Baker & Hamilton,

Sole Pacific Coast Agents,  
SAN FRANCISCO. SACRAMENTO. LOS ANGELES. NEW YORK.

## An 1895 Machine. Walter A. Wood Tubular Steel Mower.



NEW!  
GOOD!  
AHEAD!

Steel Drive Wheels, Steel Frame, Steel Shafts, Steel Knife Head, Steel Jaws for Pitman, adjustable; Steel Wrist Pin, self-oiling; Brass bearings; Eye-Winker Offers, dust proof; Serrated Guard Plates; "Wobbler" Track Board; Spring, Foot Lift and Cutter Bar, acts when wanted, at other time resting. Adds no extra weight to right hand drive wheel. Other improvements described in catalogue. Send for it.

ALL GOOD.

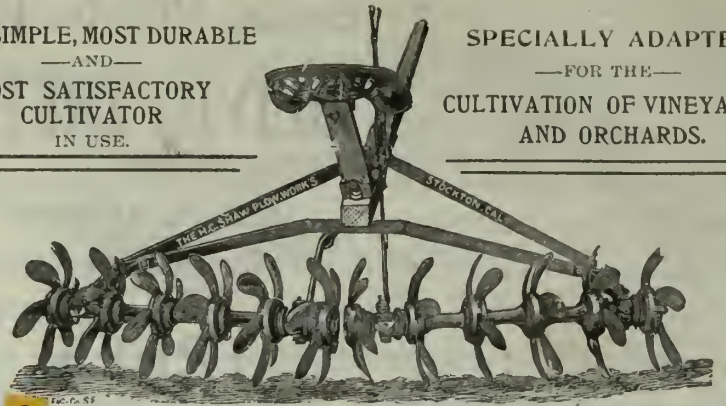
Walter A. Wood Hay Rake.  
Walter A. Wood Reaper.  
Walter A. Wood Binder.  
Walter A. Wood Repairs.

If you want the GENUINE  
Wood Goods address

**ALLISON, NEFF & CO., San Francisco.**  
B. HAYMAN, Los Angeles, Cal.

MOST SIMPLE, MOST DURABLE  
—AND—  
MOST SATISFACTORY  
CULTIVATOR  
IN USE.

SPECIALLY ADAPTED  
—FOR THE—  
CULTIVATION OF VINEYARDS  
AND ORCHARDS.



## THE MORGAN SPADING HARROW.

The best pulverizer of the age. The name Spading refers to its action on the soil. The action of each blade is like that of a small spade, lifting and turning the soil to a depth of four to six inches. The frame is arched so as to clear the most uneven ground. Style A, blades 16 inches long; style B, blades 12 inches long. Can be reversed.



## Avery's Steel Frame Napoleon Gang Plow.

Has EXTRA STRONG and HIGH BEAMS, being twenty-three inches in the clear; prevents clogging with trash.  
HIGH WHEELS, twenty-six inches in diameter.  
AXLES, one and five-eighths inch cold-rolled steel.  
THE HITCH is center draft, reaching from rear axle.  
THE LIFT is extra high and easy. Furnished with or without seat attachment and rear wheel.



## The Morgan Grape Hoe

Is one of the greatest labor-saving tools ever invented for use in the culture of grapes and berries, and is especially adapted to vineyard work. After cultivating between the rows the MORGAN GRAPE HOE will take out all grass and weeds that remain under the wires and around vines and posts, and will thoroughly stir the soil close to the vine. The saving of time and labor will soon pay the cost of this tool, for this work is usually done by hand-hoeing—a slow and expensive way.

SEND FOR CIRCULARS.

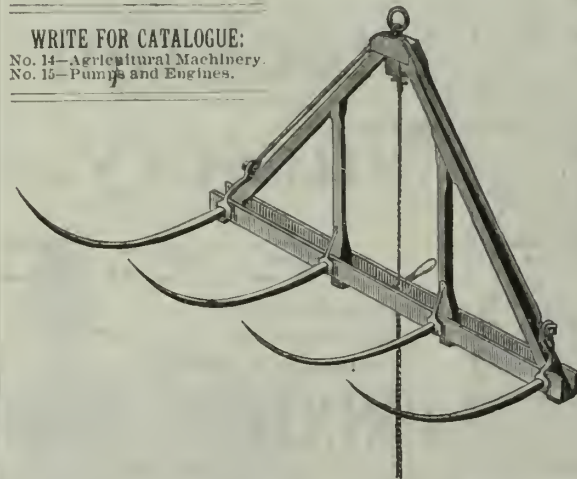
**H. C. SHAW PLOW WORKS,**  
STATE AGENTS;.....STOCKTON, CAL.

## Jackson's "Light Weight" Horse Forks,

WRITE FOR CATALOGUE:  
No. 14—Agricultural Machinery.  
No. 15—Pumps and Engines.

Made and sold under the following Letters Patent:

No. 210,455.....Dec. 3, 1878  
No. 336,607.....Oct. 14, 1884  
No. 403,019.....May 7, 1889  
Other patents pending.



The purpose of this notice is to inform both farmers and merchants, who use or sell Horse Forks, that they must not purchase Horse Forks that infringe the above Patents; and to call their attention to the fact that certain horse forks, manufactured by F. E. Myers & Bro. Ashland, O., and imported and sold by the Deere Implement Company, of San Francisco, are direct infringements of the above patents, the manufacturers of the infringing forks having admitted in Court that their forks were an infringement of the above patents, and are now paying royalty for manufacturing and selling; and they have agreed not to sell any west of the Rocky Mountains.

All parties selling or using these infringing Horse Forks will be promptly prosecuted.

PRICE REDUCED { 8-foot, with 4 tines, each ..... \$20 00  
                                  { 3 1/2, 4 and 4 1/2-foot, 4 tines, each ..... 25 00  
                                  { 5 and 6-foot..... 30 00

Extra Fork Tines, \$2.50 each.

**BYRON JACKSON MACHINE WORKS,**  
625 Sixth Street, San Francisco, Cal.

## Protect Your Trees

—WITH—

**Gilman's Patent Tule Tree Protector.**

PATENTED AUGUST 1, 1893.

FIRST PRIZE—Medal and Diploma—California Mid-Winter International Exposition.

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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 18.

SAN FRANCISCO, SATURDAY, MAY 4, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

### At Lake Tahoe

Last week we drew our readers to a charming piece of still water near the coast, and at but little elevation above sea level. This week we ask them to rise about 6000 feet and look upon a little arm of Lake Tahoe—that greatest of all the mountain lakes of the Sierra Nevada. The lake occupies an elevated valley at a point where this mountain system divides into two ranges. It is, as it were, engulfed between two lofty and nearly parallel ridges lying to the east and west of the lake. As the higher range is on the west, the lake belongs to the eastern slope of the Sierra Nevada. The boundary between California and Nevada corners in the center of the lake, and this point is not changed, though recent surveys have inclined the southerly extension of the line eastward, so that California gets more territory.

Lake Tahoe is over twenty-one miles in its greatest length and twelve miles in its greatest width; and calculating irregularities of outline, the water surface is nearly 200 square miles. It derives its waters from a watershed of 500 square miles and more than 100 affluents of various capacities, deriving their waters from the amphitheater of snow-clad mountains which rise on all sides from 3000 to 4000 feet. The only outlet from the lake is Truckee river, which carries the surplus waters from a point on its northwestern shore, out through a magnificent gorge, out upon the arid plains of Nevada and thence to Pyramid lake.

Lake Tahoe was first seen by Fremont, after information of its existence from the Indians. It has had various names. By statute of California it is Lake Bigler, but usage has now fully established the name Tahoe, which is said to be a Washoe Indian word meaning "Big Water" or "Deep Water," though some claim that the word simply means "Fish Lake."

Tahoe impresses all visitors as a grand piece of water. Its great size, when one considers its lofty perch amid the mountain summits, is profoundly impressive. The depth of its waters also strike one with awe. Local declarations of its depth, in connection with the fact that sunken bodies do not rise, and the speed with which dangerous squalls arise without warning—all combine to make the visitor shudder while he admires. The depth of the water is usually exaggerated, although the demonstrated depth of 1645 feet, established by Dr. John Leconte, makes it deeper than the profoundest of the Swiss lakes.

The charms of Tahoe are beyond enumeration. The peculiar hues of its waters at places of varying depth are entrancing. The coolness and purity of its water at all points are notable and it is not won-

derful that it should stand as the ideal source of water supplies for the cities of central California, when population and wealth shall justify the necessary expenditure.

Our engraving gives a glimpse of one of the most popular arms of the lake, known as Emerald Bay, situated near its southwest corner. This bay has the most charming green hue to its water. It is surrounded by a beautiful fringe of timber, while the



FLOATING ISLAND IN EMERALD BAY, LAKE TAHOE, CALIFORNIA

derful that it should stand as the ideal source of water supplies for the cities of central California, when population and wealth shall justify the necessary expenditure. The picture shows only a part of Emerald Bay. It has wider waters and larger islands, but the photographer has chosen a point where an object of much interest is in sight—a floating island sustaining tree growth and capable of sustaining quite a cargo of tourists, as the picture shows.

Tahoe is a most charming place for summer resort. The delicious purity and coolness of the mountain air, the charms of the water and the peerless excellence of its product of fish, the beauties of the adjacent mountain valleys and gorges with their dense

shades and beautiful waterfalls—all these bring rest to the weary and renewed vigor to the strong. The season is now approaching for a visit to Tahoe, though just at present it has not thrown off its dense winter covering of snow.

### A Wheat Stripper.

We seem to be swinging around to Australian fashions in grain harvesting. They would not take our great combined harvesters because of cost and numbers of animals required for locomotion, preferring their own "strippers." Now reports are current that local patterns of stripping machines are to be largely made on this coast. The *Spokane Review* tells of one which it says will be largely used in Washington. The machine is said to resemble a header. A cylinder armed with iron beaters is rigged to run in the place of the reel; and instead of cutting the grain, which would necessitate the handling of more or less straw, the heads are stripped off and the beaters thrash out the grain as it falls on the draper. It is then carried to a suction fan, which cleans the grain from chaff as in an ordinary thrashing machine. The grain is sacked and dumped in piles, to be gathered up by the hauling wagons. The machinery is operated by power furnished by a small gasoline engine, and the entire machine is so light that four horses can pull it on ordinary level ground and six on the roughest farm land. Two men are all that are needed to operate it—one to drive the team and regulate the height of the sickle-bar and the other to attend to the engine and sew the sacks. The machine was conceived and constructed by William Cooper, who operated it last year with considerable success. It will start out this year with many improvements suggested by last year's experience and study. It is claimed that a machine of this description can be put up for \$300 or \$400, and with it grain can be cut and thrashed for about 50 cents an acre. Of course it is well to maintain a conservative view of such a claim until we get better demonstration. The fact that the Australians have so long adhered to stripping methods gives some presumption of value to it.

THE Massachusetts Senate last week passed an amended tuberculosis bill, which provides for full compensation for cattle killed, charges expense of quarantine after seven days to the State, and appropriates \$100,000 for continuation of cattle commissioners' work. The use of tuberculin as a test for the disease is restricted to herds in which animals have been found tuberculous by physical examination, and to animals brought from other States.



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ALFRED HOLMAN, Editor.  
E. J. WICKSON, Special Contributor.

San Francisco, May 4, 1895.

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## The Week.

### Weather and Crops.

The longing for rain which was expressed last week has been fully gratified, and all forebodings of spring drouth have been for the time banished. The greater part of the interior grain region has now moisture enough to mature its crops if there should be freedom from parching winds during the present month. Growth is now most rapid, and hay will soon be falling in vast areas. The rain also serves the orchardist a good purpose and will make it possible to give the land good moisture-covering tilth, by free use of the cultivator upon the mellowed lumps. Some young orchards which have perhaps been neglected can now feel to their benefit the thrust of the plow, to be followed at once by the pulverizing tools. With this last gift of the season, at this late day, there should not be any excuse for poorly worked fruit land for this year. The weekly weather report on another page will be found to contain many interesting details from various localities.

### Oranges for the Far East.

President A. H. Maftzger of the Southern California Fruit Exchange returns to his home after effecting a very desirable concession to the orange shippers of California. At his solicitation and argument, the Interstate Commerce Commission has rendered a decision granting railroads terminating in California, and their connections, authority to make a lower rate on oranges to the Atlantic seaboard cities than to intermediate points. This enables California growers to market their oranges on the seaboard in competition with imported oranges. The old rate was 90 cents, and the new rate will probably be 60 cents.

### Canners' Operations.

Last week we noted the disposition among those in control of small canneries in the country to start up this year. We hope they will all go into operation. It is unseemingly that any establishment should stand idle while we have such masses of fruit to dispose of. Increased business is the common talk among the leading canners about these days. Isador Jacobs, manager of the California Canneries Company, was speaking recently to a reporter about the prospects of the fruit-canning industry for the coming season. "The outlook is very good for a third larger output this year than last," he said. "The prices have gone down so low that consumers are purchasing more of the better class of goods which is put up in California. Most of the inferior articles come from the East. One thing against their goods is that they do not use as much syrup as we do. Then another cause for a greater output this year is the fact that during the hard times jobbers and retailers have let their stocks run

low and must fill up again at the beginning of the season. Then the canners in San Francisco alone will save \$250,000 in tin used in making cans through the reduction in the tariff. Last year there was shipped out of this State \$3,500,000 worth of canned goods. This year I think we will send \$4,500,000 worth." This looks well. The fruit must be disposed of in such a way that each year's output prepares the way for a greater one.

### Fruit Shipping.

The outlook for this year's fruit shipping was discussed by the Horticultural Society, as our reports on other pages show. It will be of general interest that Mr. Weinstock, who accomplished the inauguration of the auction system, and who has ever since given close attention to fruit shipping, takes a very hopeful view of the situation, as his essay, which we print this week, shows. It is also gratifying that, if current reports be true, the railway proposes to get itself between the shippers and the refrigerator car sharks. Of course the railway is not in for philanthropic motives, but that does not matter in this case. The report is that the Southern Pacific has now tired of seeing the refrigerator companies share among themselves all the revenues from the profitable traffic, and is preparing to establish a fast fruit line of its own. In conjunction with the Union Pacific and the Chicago and Northwestern railroads, it will inaugurate a fast fruit line between California and Chicago about the middle of June. Between 1200 and 1500 ventilator cars are now being built in the East for the purpose. Heretofore the fruit-growers of California have not taken kindly to the ventilator car for the reason that the service was not fast enough to get the fruit to market in good condition. They have preferred to pay the extra cost of refrigeration to avoid the risk of having the fruit spoil before it reached its destination. The railroad companies have agreed on a time card which they believe will insure the successful operation of their ventilator cars between California and Chicago. The time will be five days between Sacramento and Chicago. A train will leave Sacramento every night at midnight while the green fruit season lasts. During June, and until the fruit crop ripens sufficiently to warrant the daily service, trains will be run but twice a week. It is thought that by the 1st of July, at the latest, there will be enough ripe fruit to insure the profitable maintenance of a daily service. The railroad company does not expect to handle cherries in its ventilator cars, or any other fruit which will not stand transportation without refrigeration. That branch of the business will be left to the refrigerator companies. The company expects, however, to handle not less than 4000, and possibly 5000, carloads of other varieties of fruit during the season. It is said that the refrigerator car owners propose to meet this move of the railway by reducing their charges, so it does look as though the shippers might get more than enough to pay the freight this year.

### The Wheat Supply.

It seems to be conceded that local conditions in this country will favor a better price for wheat this summer than last. The *Millers' Guide* of New York, which by its affiliations should not do much to advance wheat prices, says few are also so bold as to claim that the wheat reserves to be carried over from the crop of 1894 will be as large as those carried over from the crop of 1893. It is now only a question of difference, or of how much the reserves of this season will be below the reserves of last season. Many believe that instead of a visible supply of above 53,000,000 bushels left from the previous crop, it will this year drop much below 40,000,000 bushels. If that proves to be true in result, taken with smaller reserves that will necessarily be carried in farmers' hands, the amount of available wheat will be so much less than in July of last year that, of itself, it will create a higher range of values than the low prices touched during the summer of 1894, for it is to be considered that the prospects of production for this year are below the production of last year.

### A Jam Shame.

W. H. Wright, of San Jose, the well known canner and preserve maker, becomes righteously indignant at American prejudice which prefers bogus jam under foreign labels to pure jam of California construction. In a recent interview with a *Mercury* reporter concerning the enterprising movement toward jam-making being discussed by San Jose Grange, Mr. Wright berates unpatriotic Americans in these words:

A few years ago I went into competition with a European manufacturer on a large order for jams in New York. Several experts were called in and the goods were thoroughly analyzed. The article made by the foreign manufacturer was in almost every case found to be adulterated, while that of the San Jose Fruit Packing Company was found to be perfectly pure. Notwithstanding this fact, and notwithstanding the fact that our price was equally low, the buyer felt obliged to purchase a large proportion of the foreign goods, as his customers were in the habit of using them and he considered it useless to work up a trade on a better article, even though it cost less money. In consequence, after proving that our goods

were superior we only received a small portion of the order. So long as so many of our wealthy American fathers are seeking to provide their daughters with foreign princes, and the rest of the family with foreign jams, we shall have more or less discouragement in introducing the home article. Public sentiment is what must be changed before our producers can stand on an equal footing with that of the old country.

Mr. Wright puts the matters pointedly. At the meeting of San Jose Grange this issue was clearly recognized and will be met. The proposition is not to start up any big enterprise in the way of manufacturing fancy fruit preserves till the public are educated to a taste for the local products. This may be done in a small way. The product can be sold through agents and pushed by them the same as the dried fruit is at present. It is proposed to inaugurate a system that will reach the market slowly but surely upon the merits of the home product. It was the sense of the Grange that the agitation looking to a practical and permanent solution of the problem should be kept up and next week Mrs. M. J. Tarleton will read a paper upon the subject.

## Advance in the Price of Wheat.

At last there is a decided upward movement in wheat. The conditions to which the RURAL PRESS referred some weeks back as likely to affect prices for the better have finally manifested themselves in so positive a way as to be unmistakable, and the result is witnessed in rapidly advancing quotations in all the general markets. It appears suddenly to have been found out in England that stocks of wheat and flour have run down to almost nothing, and that some of the assumed sources of supply are falling short of the calculations. These facts are as apparent in this country as in England, and have especially affected the Chicago market, which is the great center of the American wheat trade. Since April 8th, wheat has gone up 94 cents in Chicago, and as we write (on Wednesday afternoon), the market is stronger at the advanced price than at any time these two or three years past. A very notable feature of this movement is that, while both at London and Chicago prices are advancing, Chicago is clearly making the pace. Hitherto, Chicago prices have reflected London prices: now London quotations steadily follow the fluctuations at Chicago. This is a new fact in the grain trade, and by many knowing men it is taken to indicate that America has at last become the dominant factor in the bread-stuffs markets of the world.

The advance already made in Chicago and London amounts approximately to two dollars per ton, but in California the local situation is such that the whole advance has been gobbled up by the holders of tonnage, leaving prices for wheat practically where they have been the past season. The main fact in this unfortunate local situation is the big holding of wheat in the hands of the McGlaulin "Deal." Approximately 200,000 tons of old wheat belonging to the "Deal" is stored at Port Costa, and it is generally understood that its real owner is the Fair estate. It is further understood that the court by which the affairs of the Fair estate are being administered has directed that this vast store of wheat be "unloaded" as rapidly as possible. At the same time all the available ships have been hurriedly chartered at an advance upon recent quotations for tonnage. Knowing ones assume that these charters have been effected for the purpose of carrying the wheat belonging to the "Deal" to Liverpool.

This makes a dull market at San Francisco, for where, say the shippers, is the use of buying or contracting for wheat if there be no ships to carry it away? However, if this advance movement in wheat values at Chicago and London shall continue, as there is good promise of its doing, there must before long come a corresponding advance in local prices. It is still very early in the season and there is time to attract a new lot of shipping to this port, though it will undoubtedly have to be paid for at a heavy advance over the carriage rates of the past two or three seasons. Again, hope is expressed that the railroad companies will come to the relief of the situation by making a cheap rate from here to New Orleans, and thus affording a cure for the congestion which is so demoralizing.

This whole situation, with its new and surprising conditions, has come so unexpectedly that even those best informed cannot feel certain that the advance is a permanent one. Another week will probably go far toward establishing the facts, and it is needless to say that the whole country will watch the developments with a very eager interest. Nothing could help California so much just now as a substantial and permanent advance in the price of her staple products, of which—in spite of all the talk about other things—wheat continues to be the king.



## From an Independent Standpoint.

The chief political interest of the past few days has been in connection with operations in Nicaragua on the part of Great Britain and with the attitude of the United States Government in relation to these operations. In pursuance of a demand against Nicaragua for a money claim, British armed forces have landed at and taken possession of the Nicaraguan port of Corinto, with the avowed purpose of collecting and appropriating the customs revenues. This is England's way of getting what she claims due her from weak and helpless peoples. On a big scale in Egypt and less notably in smaller countries, the world over, she has done this sort of thing without protest; and from her point of view it no doubt has seemed legitimate and proper enough. But it so happens that Nicaragua is in America—part of a continent over which the United States, under the principle of what is called the Monroe Doctrine, assumes the character of a Protector. It has been specifically declared again and again by the Government at Washington that American soil is not and shall not be subject to European aggression. The little republics at the south have relied upon this dictum as a bulwark of defense, as indeed it has proved to be on more than one occasion.

There are special reasons why the Monroe Doctrine should be invoked for the protection of Nicaraguan soil against British invasion. The United States and the republic of Nicaragua are practically (if not quite nominally) co-partners in a great inter-oceanic canal project. England's interest in the world's commerce and her military status as the Mistress of the Sea, makes this project a matter of profound concern to her. It is an open secret that she would like a dominant share in the canal or, failing in that, a point of military vantage in relation to it. Now, the port of Corinto is less than a hundred miles—or about five hours' steaming—from the Pacific end of the projected canal. It is finely situated for a naval station; and with it as a base of operations, a few war ships could effectually guard the entrance to the canal and so render it useless in a military sense. That England would be vastly gratified to hold Corinto permanently nobody doubts. That she hopes under pretext of the present trouble to so hold it is very generally believed. She has become possessed of other naval strongholds in different parts of the world by methods very similar; and there is good reason for the opinion that what she is now after is not merely a petty sum of money but a slice of Nicaraguan territory handy to the inter-oceanic canal and from which she may oversee and dominate that great highway.

In view of these conditions—namely, of our obligations under the Monroe Doctrine and of our special interests in relation to the Canal—it was clearly the duty of the Government at Washington to have prevented the occupation of Corinto. Mr. Cleveland, through the Secretary of State, should have informed the English Government that the United States would not permit the landing of British troops. He should have declared the difference between England and Nicaragua to be a matter proper for settlement by arbitration and have tendered the good officers of the United States Government toward the furtherance of such a settlement. He should then have sent two or three of our big new war ships into Nicaraguan waters to show that he meant business. This would have been effective and it would have been consistent with our national obligations and our national dignity.

But he didn't do it. He did just nothing at all but have a long conference with the British Minister at Washington. It is quite probable that the Minister gave him assurances that the occupation of Corinto would be only temporary. Otherwise we cannot believe that he would have taken the matter so casually; but this is no excuse for relinquishing a rule which for half a century has illustrated the benignity, the moral power and the authority of the American Government.

As we write on Wednesday matters are reported to be approaching a settlement. Under the terror of the occupation of Corinto the Nicaraguan Government has consented to pay what it still asserts to be an arbitrary and unjust claim; but it is condi-

tionally demanded that the British forces shall first be withdrawn. The British demand is that the money shall be paid under duress in the presence of the fleet—in other words, England seeks not only the amount of her claim, but the humiliation of Nicaragua. It is believed that a compromise will be reached during the next few days.

The Half-Million Club appears to have been having a fine time of it during the past two weeks. In its elegant train of Pullman cars it has journeyed south, north and east; and from everywhere there reaches us the echo (by telegraph) of popping wine bottles, of reciprocally complimentary addresses, and of music by the band. Hilarity and good-fellowship appear to have ruled each day and hour of the journey. All this is well enough for those who like that sort of thing; but the RURAL begs leave to say—we trust without rudeness—that substantial business purposes are not much promoted by picnicking and holiday oratory. The scheme of the Half-Million Club, as we understand it, is to advance the population and wealth of San Francisco. Now, the way to do this is to *build up California*. The way to build up California is to provide capital to open up and work its resources, and to keep the wheels of its energies in motion.

The proper business of the Half-Million Club is to provide capital for those who can profitably use it in productive industry; to make a market here for the products of the country; to provide ways by which people attracted to this State and city may make a livelihood for themselves and increase the volume of labor and of business. Now this is a serious task, and we maintain that it can better be done by serious work than by any combination of sky-larking, speechifying and brass-banding. The methods of the "boom"—which differ not much from the methods of the circus—are not suited to this time and we regret to see them substituted for earnest and systematic business effort.

## The Sapsucker in the Foothills.

TO THE EDITOR:—I have about twenty almond trees, about five or six years old, several of which are "gumming" very badly this year, and though I have cleaned the gum off once or twice, the trees still produce it around the trunk and lower portion of the limbs. The affected trees are punctured with small holes through which the gum exudes, and they seem to have been made by woodpeckers, as far as I can make out. We pruned the outer limbs of all the trees pretty severely the past winter, as they were all down on the ground, making it very awkward for cultivation, and especially hoeing around the trees. All of them have been treated in the same way, or I should think that the heavy pruning had caused the gumming. There is a large crop of fine almonds on every tree, including the two or three I have especially mentioned. As far as I can find out, the gumming will not injure the trees so long as it is cleaned off, but I will be obliged if you would kindly give me your opinion and advice.

F. BUDGETT.

Our correspondent is probably right in his surmise as to the cause of the gumming, and there is no reason to expect injury from such. There is, of course, serious gumming of fruit trees at some localities in the foothills, which does great harm and the cause of the same is not fully understood. We imagine Mr. Budgett's trouble is not of this character.—Ed.

## The Work of Earthworms.

TO THE EDITOR:—The angle-worm part of the article entitled "Snails or Slugs" (see RURAL of April 20th) provokes me to say a few words. Great men make mistakes, but I have seen no proof that Darwin came to any wrong conclusion when he said that earthworms are soil-makers as well as earthworkers. I am quite sure that your correspondent has cultivated wormy soil without learning much about the worms. It was well that he advised stirring the soil after killing the animals who till then had stirred it for him. Darwin has given ample proof that earthworms are useful. Will your correspondent show one harmful thing that they do?

San Jose.

VOLNEY RATTAN.

## The State Board of Horticulture.

Secretary Lelong, in an interview, says that the State Board of Horticulture is all right. After the reading of the address of President Cooper, in which he reviewed the work of the Board, and stated that without financial aid the work would have to cease, the nine members of the committee went down into

their pockets and raised \$11,000. Mr. Lelong says they are now drawing against that fund. He received a letter the other day from a prominent fruit grower who offered to organize an auxiliary club to aid us financially if it were deemed necessary. They have assurances that the Board will be liberally supported by the orchardists, and they have no fear that they will be retarded. Mr. Lelong also says that the Governor regretted having vetoed their appropriation bill, but he explained that he was compelled to do so because the bill was improperly drawn. It made two separate appropriations—one for \$10,000 and the other for \$10,600. He explains that each appropriation should have been in a bill by itself.

## Gleanings.

KNIGHT'S LANDING letter: The wild blackberry crop along the river will be a little late this season, but it will probably be as abundant as ever.

HEALDSBURG letter, April 27th: Prunes falling badly; I will have half a crop. Crawford peaches light; pears also. My neighbors all report prunes light. Hay behind; average crop. Apricots all blighted.

POMONA Progress: The black scale is not as abundant in this valley as it was a year ago, and there is no other kind in or near Pomona. Orchardists are all the time vigilant, and without doubt every year will show cleaner trees and better fruit.

C. J. BERRY in Visalia Times: Sugar beets grow well here, and instead of sitting down waiting for the sugar factory to start up, feed them to your hogs; they'll fatten hogs as rapidly as corn. This has already been demonstrated by a test made by a farmer of Watsonville.

THE Chico Canning Co. has re-elected the old Board of Trustees as follows: V. David, B. F. Allen, W. B. Griswold, E. T. Reynolds, M. L. Mery, William Earl and W. J. O'Connor. The report of the secretary showed that the business of last year amounted to \$41,763 and the expense was \$37,263.

SOME time ago some dried fruit was collected at Riverside for the settlers in the drouth-stricken district in Kansas. C. W. Herron is in receipt of a letter from Leoti, Kansas, acknowledging the receipt of 500 pounds, which was distributed in ten-pound lots. The writer says that this is the first and only fruit of any sort the most of these people have had this year.

RIVERSIDE Press: If there are men out of work in Riverside now, it is their own fault. A man who picks 20 boxes of oranges where he could easily pick 50 in a day, need not complain if orchardists give the preference even to Chinamen or Japanese. The prices will not warrant the orchardist giving all the profit of the crop to the lazy. Good men are wanted for pickers, and can get fair wages for the next few weeks.

TRAVEL Advocate: The large pumpkin, the property of J. N. Bowhay, which has been on exhibition in the reading-room for several months, will be cut open at the meeting of the Farmers' Club next Saturday evening, and the seeds will be divided equally among the members. To the one raising the largest pumpkin therefrom, Mr. Bowhay will present as a prize three thoroughbred game chickens—a cock and two hens; to the one raising the second largest, three thoroughbred Leghorn chickens; and for the third largest, a pair of white or black rabbits.

A MEETING of fruit growers representing the Winters Fruit Exchange, Vacaville Dried Fruit Exchange and Suisun Valley Fruit Union was held at Vacaville on the 20th ult. to consider the advisability of organizing a central or district association covering Winters, Suisun and Vacaville. \* \* \* After a free discussion of the subject in all its bearings, a committee to consider the matter and report at a meeting, to be held May 4th, was appointed as follows: Winters—Col. Sam'l Taylor, Wm. Brink and A. L. Stinson. Suisun—J. A. Anderson and E. Chadbourne. Vacaville—Dr. W. J. Dobbins and J. A. Webster.

LOS ANGELES Times: A vast quantity of green fruit is annually imported, which proves that the United States is not yet producing all it consumes. In these importations citrus fruits cut no small figure, as will be seen from the following statement of fruits and nuts imported into the United States during the year 1894:

|                       |              |
|-----------------------|--------------|
| Currents.....         | \$ 132,267   |
| Dates.....            | 265,772      |
| Cocconuts.....        | 230,096      |
| Figs.....             | 549,469      |
| Lemons.....           | 4,272,113    |
| Oranges.....          | 1,088,204    |
| Plums and Prunes..... | 537,134      |
| Raisins.....          | 647,403      |
| Preserved Fruits..... | 545,682      |
| All Other Fruits..... | 686,315      |
| Almonds.....          | 905,297      |
| All Other Nuts.....   | 726,224      |
| Total.....            | \$10,555,974 |

SAN JOSE dispatch, 28th ult.: Reports from Eastern jobbers are to the effect that the fruit on hand there is being disposed of in very small lots. At all points there is a disposition not to buy any more than is needed for the trade from day to day. At present there are no apricots on hand in the warehouse of the Fruit Exchange, everything having been cleared out except a carload of peaches and a few cars of prunes. Lots of dried fruit held by individuals are very rare. As to the future prospects, it is certain that there will be an average crop of peaches, but the apricots will not exceed fifty per cent of last year's crop. Up to ten days ago confidence was felt that the crop of prunes this season would be abundant, but now reports are being received from all parts of the valley to the effect that the young fruit is dropping in many orchards. The prune crop will not be an average for the entire acreage. The past ten days and the coming ten days is the most critical period that attends fruit-raising. Although a small crop may mean higher prices, yet it is considered that it would be better for trade to have a good crop every year. Uncertain crops disarrange the distribution of product so as to make it difficult to dispose of it in a satisfactory manner. By the middle of May it will be possible to have a very definite knowledge and obtain a very fair estimate of the crop of the valley in 1895.



## Rainfall and Temperature.

The following data for the week ending 5 A. M., April 30, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week. | Total Seasonal Rain-fall to Date. | Total Seasonal Rain-fall Last Year to Same Date. | Average Seasonal Rain-fall to Date. | Maximum Temperature for the Week. | Minimum Temperature for the Week. |
|----------------------|------------------------------|-----------------------------------|--------------------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|
| Eureka.              | 36                           | 40.35                             | 52.22                                            | 40.21                               | 58                                | 48                                |
| Red Bluff            | 14                           | 27.21                             | 19.70                                            | 23.73                               | 82                                | 46                                |
| Sacramento.          | 72                           | 23.70                             | 14.19                                            | 20.15                               | 74                                | 50                                |
| San Francisco        | 1.12                         | 25.10                             | 16.60                                            | 23.37                               | 60                                | 48                                |
| Fresno               | 90                           | 13.59                             | 6.27                                             | 10.44                               | 78                                | 48                                |
| Los Angeles          | 28                           | 15.69                             | 6.53                                             | 19.38                               | 70                                | 48                                |
| San Diego            | 02                           | 11.41                             | 4.09                                             | 10.30                               | 68                                | 46                                |
| Yuma                 | 2.97                         | 2.16                              | 3.52                                             |                                     | 86                                | 52                                |

## Weather and Crops.

Report of the State Weather Service for the Week Ending April 29th.

We print the weekly report of the State Weather Service, a good deal abridged because many of its local observations were made before the rains of last Friday and Saturday. The reports which follow deal with conditions after the rain.

Mr. Barwick generalizes for the week as follows: The average temperature for the week ending April 29th was: For Eureka, 52°; Fresno, 62°; Independence, 58°; Los Angeles, 58°; Red Bluff, 62°; Sacramento, 59°; San Francisco, 52°; San Luis Obispo, 54°; and San Diego 58°.

As compared with the normal temperature, there was a heat deficiency at all points of from one to three degrees, except at Eureka and Los Angeles, where an excess of heat was reported of one degree at Eureka and two degrees at Los Angeles. The total precipitation during the week was: For Eureka, .40 of an inch; Fresno, .90 of an inch; Independence, a trace; Los Angeles, .30 of an inch; Red Bluff, .20 of an inch; Sacramento, .72 of an inch; San Francisco, 1.10 inches; San Luis Obispo, .60 of an inch; and San Diego, a trace. As compared with the normal precipitation, there was an excess at Fresno of .68 of an inch; at Los Angeles, .02 of an inch; Sacramento, .16 of an inch; and San Francisco .71 of an inch, while a deficiency was reported from Eureka of .48 of an inch, Red Bluff .29 of an inch, and San Diego .19 of an inch. The deficiency of heat and excess of moisture in the Sacramento and the San Joaquin valleys was just what was needed to bring forward the grain and feed and counteract the bad effects of the hot, dry, north winds of the previous week. The precipitation of Friday and Saturday were of the greatest benefit to the whole State, as the rain seems to have been the greatest in the part of the State where it was needed the most. The week's weather, both temperature, sunshine and rain was very beneficial to crops of all kinds. Some hay that was cut got wet, and a few early strawberries and cherries were somewhat damaged by the rain, but the great amount of benefit that all other crops received from it was greatly in excess of the slight damage done.

## Coast Counties.

MONTEREY (Jolon)—The past week has been cool and cloudy. This evening (April 26) a fine rain is falling. Crops are growing finely. April 27, 7 A. M., .45 of an inch of rain fell last night.

SANTA CRUZ (Santa Cruz)—Weather foggy and cloudy all week, ending with fine rain on Friday night and Saturday. Grain does not look well; too cold; general complaint that nothing grows. Wire worms very bad in many localities. Fruit very backward.

SAN BENITO (Hollister)—Late frosts have greatly injured the apricot crop. There will not be more than from one-third to one-half the usual crop. Other fruits have not suffered much. There will be a large yield of grain and hay.

SAN LUIS OBISPO (San Luis Obispo)—The rain of Friday night, while it damaged some hay, has assured other crops. (Santa Margarita)—The long expected rain came at last and, although there was nothing suffering yet, this rain will do a great deal of good. (Paso Robles)—The cool, cloudy and foggy weather the fore part of the week has been favorable for the growth of grain and vegetables. A shower Friday night was of great benefit to heading grain, helping as well to pull up the later sown. Vines are setting fruit. Peaches are most large enough to be thinned.

## Southern California.

SAN DIEGO (Escondido)—The cloudy and misty weather of the past week, with occasional light showers, has greatly benefited the growing crops, especially late-sown grain.

SAN BERNARDINO (Chino)—Barley hay, as a general rule, will be quite short this year. A larger acreage than usual was planted.

LOS ANGELES (Pomona)—Hay and grain crops are coming out well. Prune crop is light; apricot crop less than one-quarter crop, injured by rain and frost. (Los Angeles)—Cool, cloudy weather prevailed, with occasional light sprinkles and showers of rain, which were favorable to all crops, as the top soil was beginning to cake. Haying continues; crop and quality good. Wild oats being cut for hay; crop said to be fine.

ORANGE (Tustin)—Weather has been cloudy and cool, with

heavy night and morning fogs, turning to light showers. The condition has been favorable to the filling of barley, but not for orange picking. There has not been rain enough to damage hay. Crop prospects continue very favorable, except as to some fruits.

VENTURA (Saticoy)—Past week has been very cloudy and foggy, which was of great benefit to late sown grain.

SANTA BARBARA (Ballard)—Unusually foggy weather, that has been very beneficial to late grain. We have had heavy southeast winds for twelve hours at this writing and there is every indication of a storm.

## Santa Clara Valley.

ALAMEDA (San Leandro)—Cool weather this week, so that cherries did not advance fast. The cutworm is destroying the tomato vines nearly as fast as they are set out in some fields.

SANTA CLARA (Campbell)—The order of the day hereabouts is thinning apricots and fighting canker worms. No special damage has been done the trees, but it is a great expense to keep the worms down. (Gilroy)—The apricot crop about here may be put down as almost a total failure because of the frosts. Cherries are but little better and have suffered severely. Peaches will show a fair but not large crop, and prunes will be less than the average. Grapes promise a large yield. (San Jose)—It is now believed that there will be more than half a crop of apricots. One orchardist places it at three-fifths. Other varieties are looking well and the weather is just right for their development.

## Sonoma and Napa.

NAPA (Napa)—Apricots, almonds and cherries promise light crops. All other fruits and berries doing nicely. The rain has been of great benefit.

SONOMA (Bennett Valley)—Tree fruits are somewhat damaged by frost. Prunes suffered some, while peaches, pears and apricots are severely damaged. (Forestville)—Vines are putting out finely; apple trees are looking well, but some varieties will bear very little fruit. Peaches do not look well; the prospect is for a short crop. Cherries, prunes and pears set well, but are dropping badly. (Petaluma)—The prune and plum bid fair to be very abundant crops, and also apples, while the pear will be lighter than anticipated, as many of the blossoms have blighted. Cherries have also blighted, but not as bad as pears. (Sebastopol)—Some curled leaf reported in orchards near the Laguna. Pears are well set and apples promise a fair crop.

## San Joaquin Valley.

STANISLAUS (Crow's Landing)—The crop prospect is very favorable indeed.

MERCED (Los Banos)—The fruit and almond trees which have been losing leaves lately are suffering from the effects of a bug which bores into the tree, deposits its eggs and lives on the leaves of the trees.

TULARE (Goshen)—Showers on the 26th and 27th insure the filling out of wheat and barley. All crops are looking well. (Tulare)—It is now generally admitted that the fruit crop was not as seriously damaged as was at first supposed. Apricots have suffered the most, but in some orchards there is a small crop of that fruit. (Visalia)—From a very careful examination recently made of all of the principal orchards, it is found that, with the exception of apricots, there will be a very fair crop of the very best fruit, and what is lost in quantity will be made up in quality and size.

KERN (Bakersfield)—Reports of a fine grain crop come in from every direction. (Agr. Ex. Station)—Fruit and all farm crops are in a healthy condition.

## Sacramento Valley.

TEHAMA (Red Bluff)—The drying winds and excessive heat of the last part of last week and the first three days of this week caused a setback to late-sown grain on uplands. The ground became caked and hard and the grain plant is turning yellow. The showers of Saturday somewhat contracted the ill effects of the north winds, but unless more rain is had soon the grain crop will not turn out as well as expected two weeks ago. Winter grain, however, will yield a large crop.

BUTTE (Honeycut)—Crops are now secure for this season. (Oroville)—The apple crop through the foothills promises to be large. (Durham)—While the crops were not suffering for rain, the late grain will be greatly benefited by the heavy rains of the 26th and 27th.

YUBA (Wheatland)—Rainfall of 27th very beneficial to grain and fruit, especially late-sown grain. So far all kinds of fruit are doing well.

SACRAMENTO (Arno)—The fall of rain assures the crop of late-sown grain. All around there is every promise of more than an average crop. (Union House)—Late rains have been a great benefit to both wheat and barley, but have injured small berries. (Sacramento)—The rain has renewed all crops, and will insure good crops. Late-sown grain was suffering very much. Strawberries were also suffering, but will be a good crop now. (Elk Grove)—Grain growing steadily, the rain of Friday doing much good to grain crop but damaging strawberry crop.

YOLO (Winters)—Haying has commenced in this neighborhood and there will be an abundant crop harvested. First apricots shipped on Saturday to Chicago. They were seedlings from Royal stock. (Woodland)—The showers were just in the nick of time.

SOLANO (Batavia)—The rain was a great benefit to the late-sown grain, and with favorable weather will come out all right, unless heavy north winds should occur. There is a great deal of foulness in the grain this year, especially on the low land, and yield will not be as heavy as last season per acre.

## Mountain and Foothill Counties.

SHASTA (Oinda)—The indications now are for a fine crop of fruit in this vicinity, especially the peach crop. (Anderson)—It is predicted by many of the fruit-growers around here that there will not be more than one-fourth of a prune crop in this vicinity.

PLACER (Roseville)—We have now had rain enough to insure a good hay and grain crop. Potatoes and garden truck in general look well. (Rocklin)—Rain came in good time to help crops of all kinds, with exception of strawberries and cherries, as north winds had dried up ground considerably.

IT IS REPORTED that thirty-six tons of caterpillars and a large number of cocoons—in all 35,000,000 insects—were destroyed in the effort to drive the pest from the young plantations of trees on Hong Kong Island. They appeared on the pine trees with which the Government is trying to reforest the island, and lasted for two months. Stations were established where the caterpillars were received and paid for by weight, and this method appears to have proved as effective as could be desired.

ACCORDING to a recent legal decision reported in the *Timberman*, hard wood is "any tree that has a leaf as distinguished from a needle." A man contracted to deliver to a railroad hardwood cordwood, and he delivered poplar in part fulfillment of the contract. The railroad rejected this as not hardwood, and sued, but the contractor won the case on the decision of the court.

## THE DAIRY.

## The Dairy Industry.

By E. C. SHOEMAKER; read at the Farmers' Institute in Tulare.

Of all the various branches in farming there can be found but one that has been able to hold its own to a good degree, all through these years of depression. This branch is known as butter dairying. How is this, when we consider that the prices paid for good cows are to-day less than years past, also the value of farms is greatly reduced, feed and labor less than it has been for several years? Now with all these items less, we still find a demand for good butter at about the same prices as we paid years ago. With the above facts plainly in sight of the average California dairyman and rancher, I am surprised that this class of our western coast will not avail themselves of the opportunities of the improved manner in feeding. Too many have permitted their cattle to roam in a careless manner the fields, valleys and mountain sides for a living, with but little if any shelter in cold or stormy weather. Or in plainer words, a large majority of the California cows have not been bred right, fed right, handled or cared for as they should be and in turn are wholesale robbers of food that they never fully pay for. It is very certain that the butter must come from the food, and that the better the food the more butter a cow will produce. At the same time nearly every cow will increase to some extent in her milk by the better food. If good feeding will not give an increase in milk and butter she will soon become fit for the butcher. Then you should sell her at some figure, or else kill her and cure the meat for family use. The best breeds are full of worthless animals that pull down the profits and cause an injury to the dairyman's bank account.

The average dairy cow to-day is a great improvement over those of centuries ago. The great producing modern cow is the result of fussing. Does it not pay to fuss with a cow? To give her warm stables; keep her clean, give her cow's food in abundance—but not in overdoses—if she might become stalled, or in other words, her butter fat and milk machinery will for weeks or months refuse to work.

An experiment was tried near my former home in Chester county, Pennsylvania, last winter, by having the cows clipped. These cows belonged to a leading dairyman. Before clipping the day's milk was weighed; one day after clipping the milk was again weighed, which showed a larger increase; the second day's milk was also weighed, which showed a larger increase. Since then I have not learned the result of the winter. These cattle were well housed and fed. The nearer a dairyman is to his market, other things being equal, the better off he will be.

The dairyman has one great enemy to contend with. This enemy interferes with your business, not only by day but steals into your camp at night and takes the place of your own golden butter. This intruder is known as butterine, oleomargarine and other "ines", just to lessen the price of home-made butter. The dairymen must organize against this intruder. There is an organization that led the fight in Pennsylvania years ago. You have it here. Back them with your acts and you will be rewarded. This farmers' organization is the grange—the only one that has a thorough State and National organization.

It has been found that oleomargarine is not as appetizing as good pure butter. At a certain blind asylum, oleomargarine was substituted for butter without the knowledge of its inmates; in a few weeks a small amount was required, the demand was less when the boys were informed of it. They said it was good but they did not care to eat so much of it, which leads one to believe that it did not assist the digestive organs as butter does. Can the butter dairyman and the dairymaid sit in silence and not act in their own interest, when it is morally certain that this coast has been run over by this intruder even in the rancher's home, disguised more completely than a train robbers' mask would hide the bandit's face? To show how persistent the dealers in oleomargarine are in selling their articles I will recite a portion of the work done by a Mr. Beck of Pittsburg, Pa., in October, 1893. He was elected as agent and detective in obtaining evidence of violations of the law. The result has been that over 200 cases of violation of the law were obtained by Mr. Beck, and on which prosecutions have been instituted by his attorney. As a result of this work \$1900 has been collected in fines, and \$950 has been paid the county treasurer. In June, 1894, it was deemed expedient to appoint other agents. Accordingly ladies were appointed unknown to the public, who have obtained 178 cases upon which suits are being brought. It is therefore demonstrated that the law can be enforced. It is to be hoped that all assistance will be given to the California dairy commissioners and that nothing but pure butter and milk, also cheese, be sold. In short, the dairymen must co-operate as farmers and producers—co operation is our rock of safety.

THE Chinese divide the day into twelve parts of two hours. The Italians reckon twenty-four hours round, instead of two divisions of twelve hours each, as we do.



## HORTICULTURE.

### April Meeting of the State Horticultural Society.

The main subject considered at the April meeting of the State Horticultural Society, held on Friday afternoon of last week, was that of marketing our fresh fruits in the East. It grew out of Major Weinstock's paper—printed on another page—and was participated in by Prof. Allen, Major Weinstock, Mr. B. F. Walton and others.

Prof. Allen set the ball rolling by pointing out the evils of the auction system and maintaining that no shipments should be made from California excepting in answer to specific orders and at a stated price—in other words, that the producer should only sell his stuff under the f. o. b. system. The advantages of this system were well set forth by Prof. Allen. He admitted that it was a system very hard to establish, but thought there would be no profit in the fresh-fruit industry until it should be brought about.

Major Weinstock took the opposite position. He declared that the system by Prof. Allen had been tried in California and had failed. In 1885, when we had only one-sixth or one-seventh of our present supply, it had failed to consume it even at ruinous prices. The auction system was inaugurated to do what the f. o. b. system had failed to do and what in the very nature of things it could never do. For a time, he declared, it had succeeded admirably and had failed, in his judgment, only because abuses had grown up under it. These abuses were the multiplication of auction rooms with an inevitable dispersion of buyers and the exclusion of any and all bidding from the auction sales. These abuses, he thought, were in the way of being remedied. The movement set on foot by the Fruit Growers' Convention at Sacramento was crystallizing into an organization which he thought would prove strong enough to break up the evils in the Eastern auction rooms and fully protect the interests of producers.

There was a good deal more talk on the subject, in which Mr. Walton and others took the ground that it was only waste of time just now to discuss systems of selling. The fruit growers, acting through the committee named at their Sacramento meeting, had determined to try to reform the auction system; that has been accepted as the policy of the season of 1895; and since this was the fact, the practical question is how best to support this committee in its efforts. This sentiment met with general acceptance, in which Prof. Allen joined; and the subject, "How Shall the Weinstock Plan Be Supported?" was made one of the topics for the May meeting of the Society. Major Weinstock was invited by formal resolution to be present and lead the discussion.

#### THE BLASTOPHAGA.

Secretary Wickson announced that Mr. Roeding of Fresno had received from Smyrna quite a lot of green figs which contained living blastophagas. Mr. Alexander Craw had also received specimens of Mr. Roeding's importation and noted the perfectly fresh condition of the figs on arrival. An effort will be made to induce these insects and blastophagas of another species which Mr. Roeding will receive from Mexico to take up their abodes in the Capri figs which Mr. Roeding has and perfect the same offices with the fig of Smyrna that they are believed to do in that country. Mr. Lelong promised that the Society should be informed from month to month of the progress of the experiment.

#### GOV. BUDD'S VETO.

Another important matter considered by the Horticultural Society was Gov. Budd's veto of the appropriation for support of the work of the State Board of Horticulture. After some discussion, in which it was found the feeling was all one way, the following resolutions (reported by a committee consisting of Hatch, Fitzsimmons and Holman) were adopted by unanimous vote:

Whereas, The Legislature of this State passed, without a dissenting vote, Senate Bill No. 883, appropriating \$20,000 for the uses of the State Board of Horticulture; and

Whereas, The Governor in his wisdom did not sign said bill; and

Whereas, It is the sense of the California State Horticultural Society that this action has struck a heavy blow at the horticultural interests of this State; and

Whereas, The property interests involved in the fruit industry of the State of California amount to hundreds of millions of dollars; and

Whereas, The refusal to allow the State Board of Horticulture sufficient appropriation has left this vast property interest unnecessarily exposed to the greatest danger of deterioration or destruction by insect enemies and diseases which continually threaten the fruit industry of the State; therefore be it

Resolved, That the California State Horticultural Society hereby deplores the action of the Governor and requests him to take such action and make such recommendations as shall, if possible, result in continuing the necessary and all-important work of the State Board of Horticulture; and be it further

Resolved, That a copy of these resolutions be forwarded by the secretary to the Governor, to the press of the State, to the members of the Legislature and to each County Board of Supervisors.

#### CROP PROSPECTS.

A general discussion of crop prospects confirmed in the main the previous reports of Weather Observer Barwick and added little to the information

already published. It was agreed that apricots will be a very light crop, almonds not so bad but still below the mark and pears rather light. Nobody seemed able to explain a blight which appears to have attacked pear orchards very generally during the past two weeks. Prunes are not up to the average in any of the leading localities. Other fruits promise a bountiful yield.

#### TO MEET AT YUBA CITY.

In pursuance of a suggestion made at the March meeting, it was decided to hold the May meeting (date, Friday, May 31) at Yuba City and to make it an all-day session. Messrs. Walton, Stabler and Kells were named as a local committee of arrangements. By resolution, the following-named persons were invited to address the Yuba City meeting on the general subjects of thinning, processing and marketing: Major Weinstock, B. F. Walton, Ralph Hersey, F. M. Richter, W. P. Hammon, Frank H. Buck and A. T. Hatch.

## FRUIT MARKETING.

### The Fruit Marketing Outlook for 1895.

An address by H. WEINSTOCK, ESQ., of Sacramento at the April meeting of the State Horticultural Society.

I am asked to express an opinion concerning the prospects for the marketing of California fruits during the coming season of '95. To my mind the outlook is unusually hopeful and encouraging, and, unless the unexpected takes place, the season of '95 should be a most profitable one to all concerned in the industry.

My conclusion is reached as a result of the following line of reasoning. Looking back to the disastrous season of 1894, and analyzing the causes for the unfortunate results of that year, I find they may be enumerated as follows:

First—Hard times among fruit eaters.

Second—The railway strike.

Third—Unsatisfactory railway service.

Fourth—Excessive refrigerator and local railway charges.

Fifth—The glutting of markets.

Were these conditions to be repeated in '95, the results for the coming season would be no better than were the results for '94; but, fortunately, we have every reason to believe that the conditions in all directions are much improved.

Taking up the causes enumerated one by one, and comparing the present outlook with the conditions of the recent past, we find that, while times are not yet normal and are far from being as prosperous as might be hoped for, yet the general tendency is upward. The ranks of the unemployed throughout the country have been diminished. Shops and mills and factories which a year ago were practically idle are now more or less active and are giving employment to large numbers who were then without work. The outlook, therefore, is that while we cannot reasonably hope for rapid betterment, yet there is likely to be a slow but sure improvement in industrial conditions.

Touching upon the second cause for low prices enumerated above—that of the disastrous railway strike—it may safely be said that, while a repetition of such a gigantic strike is among the possibilities, yet it is far from a probability, and there is every reason to believe that the present peaceful situation in railway circles will continue indefinitely.

Touching upon the third cause mentioned—that of unsatisfactory railway service—it can be said that the Southern Pacific Company are using their best endeavors to arrange with their connections for a five-day ventilated car service from Sacramento to Chicago, with every hope of bringing the matter to a successful issue. In addition to this, an order has been placed for 700 additional fruit cars, which will be put into service the coming season. And furthermore, so far as can be learned, the various connecting railway companies handling California fruits propose to do all that is possible to insure a more prompt service all along the line.

Concerning the matter of excessive local railway and through refrigerator charges: The announcement has already been made that refrigerator charges have been reduced from \$35 to \$50 a car, according to point of destination, which is a material gain to the grower. In addition to this, Mr. Stubbs of the Southern Pacific Co. has promised to review the local rates on fresh fruits with a view of seeing if they can be modified in favor of the shipper, and a favorable report is now looked for from him almost daily.

Concerning the fifth and last reason for the disaster of '94—that of the glutting of markets—it is a source of gratification to be able to state that never before in the history of the California fruit business has it been nearer possible than now to regulate the distribution of our fresh fruits with a view of preventing gluts. The recent formation of the California Fruit Growers and Shippers' Association (which embraces within its membership all of the great shipping firms, the co-operative societies and many of the large growers, who have pledged themselves to act as a unit in the matter of regulating distribution) makes it possible to direct Eastern

fruit shipments with that degree of intelligence necessary to success, hitherto impossible.

The establishment of a Bureau of Information, which is one of the purposes of the new association, will daily place before the members a bulletin, giving a complete statement of the situation, thus enabling the shippers to direct their fruit in such manner as to avoid both famines and gluts.

Members of the association have already taken steps to bring about the consolidation of the several auction houses in each of the large Eastern cities under one roof, so that all bidders will be brought together at the same place and at the same hour, thus largely preventing the fruit from being forced into competition with itself while yet the property of the California owner.

A further result of the new association will be the abolition of the rule established in several Eastern auction rooms of selling only to members of certain associations, thus barring out numerous small but important bidders.

From all that has been stated, it can readily be seen how much more favorable are prospective conditions than have been the conditions in the recent past. While the fancy prices which prevailed years ago for California fruits in Eastern markets need never again be looked for, because of the increased quantities to be marketed, yet there is every reason to believe, owing to the improved conditions, that the increased shipments of the coming season are likely to yield reasonable and living prices—prices such as should make the fresh-fruit business of California profitable enough to compensate for all the energy and capital and intelligent effort that have been applied to its development.

## TRACK AND FARM.

### How to Lay Off Tracks.

As we have so many inquiries from our friends as to how to lay off tracks of different lengths, we hereby give the following rules for building half-mile and mile courses, as published in the Kentucky *Stock Farm*:

**Half-Mile Track.**—For a half-mile track draw two parallel lines 600 feet long and 452 feet and 5 inches apart. Half-way between the extreme ends of the two parallel lines drive a stake; then loop a wire around the stake long enough to reach it either side. Then make a truce curve with the wire, putting down a stake as often as a fence post is needed. When this operation is finished at both ends of the 600-foot parallel lines, the track is laid out. The turns should be thrown up an inch to the foot. The stretches may be anywhere from 45 to 60 feet wide.

**Mile Track.**—For a mile track, draw a line through an oblong center 440 yards in length, setting a stake at each end. Then draw a line on either side of the first line, exactly parallel with and 417 feet and 2 inches from it, setting a stake at either end of them. You will then have an oblong square 440 yards long and 834 feet 4 inches wide. At each end of these three lines set stakes. Now fasten a cord or wire 417 feet and 2 inches long to the center stake of your parallelogram and describe a half-circle, driving stakes as often as you wish to set a fence post. When the circle is made at both ends of your parallelogram you will have two straight sides and two circles which measure three feet from the fence—will be exactly a mile. The turns should be thrown up an inch to the foot.

### Horse Notes.

Don't "break" your colt, educate him. He may be a little wild, especially if he has been petted in the stall and fed from the hand at the yard fence. In this manner he becomes familiar with mankind and "familiarity breeds contempt," 'tis said. He learns of man's weakness and may discover that, physically, he is man's superior. Don't whip him, for if you do, ten chances to one, you will make him vicious. It were better to give him to understand that it is an amusing drill through which you wish to go with him, and if you do not ask too much at first he will soon take pride in doing his part.

After foaling feed the mare plenty of nutritious food, stimulating her nourishment for the foal, such as ground oats, bran and a little ground wheat, with hay and a few carrots. If the colt is weak in its limbs, feed corn for a few days. If the mare does not give sufficient milk, procure a bucket of water and a saucer of wheat flour, adding and stirring till thoroughly mixed, making a flour gruel, and giving her. Do this once or twice a day until she furnishes sufficient milk for the colt. This is the greatest milk-producing food the writer ever used, but the only true milk-producing food is rich grass. Teach the colt to eat as soon as possible, and get it started to grow, and keep it growing. The better care and feed it gets the first two years, especially the first year, the better animal you will make of it. Feed and care are everything in developing your colts. They should be halter-broken when but a few days old, as they are much easier handled when young.



It is a good plan to merely harness break them at one year old; they make better and more trusty and teachable horses.

The *Kentucky Stock Farm* says: "There are in all cities a considerable number of old, broken-down horses, still capable of being fattened on grass, that could be humanely relieved of the pains of an earthly existence and made profitable by shipping either as fresh meat in cold storage or as dried meat. If the statements made as to the demand in Germany for this sort of food are true, all that is now wanting is the capitalist who has the courage to enter this new industry. The man who inaugurates such a movement, if it is practicable, will be a public benefactor. These inferior animals not only consume a great deal more than their services are worth, but they interfere seriously with the market for better horses. To get rid of them would not only be an advantage to the present generation of horses and horsemen, but would tend to improve those which are yet to come. In every point of view it would be a benefit to have this class of animals removed from the country, and if our German friends are sufficiently fond of horse beef to be of assistance to us in accomplishing this result, our gratitude to them will be fervent and profound."

## THE APIARY.

### Notes from Southern California.

Dr. E. Gallup, of Santa Ana, gives the *American Bee Journal* some notes from his locality which are of general interest in this State. He says we have had a splendid winter here in California. C. W. Dayton, at Florence, Cal., says bees were gathering pollen and honey rapidly on Jan. 13th. They were no doubt gathering from the eucalyptus, as there are many groves in and around Florence. The fragrance from eucalyptus honey is remarkable. I have often wondered why California bee-keepers did not set out the trees around or near their apiaries. They are a remarkably fast growing tree, and can be had of any nurseryman at one dollar per hundred. After the first year they need but very little water.

I am asked by many Eastern correspondents why bees cannot be kept in the valleys as well as in the mountains. They are kept in many localities in the valleys, and in other localities the inhabitants proclaim them a nuisance. Then the honey is not, as a general rule, of a good quality. In many cases I think they are like the old lady who lived near me in Wisconsin. The first season that I kept bees there she complained bitterly that my bees were carrying all of her currant blossoms away, and she should not raise a single currant, etc! Another thing, she was afraid of her life every time she went outdoors, for the pesky things she knew would sting her to death some day!

Bees do remarkably well in the valleys, so far as increase, storing honey, making wax, etc., is concerned, and at certain seasons they store a first rate article of honey. A Mr. Konkle, three miles west of Santa Ana, rears lots of them for sale, and for their wax. He increased from 15 (and the most of them only nuclei) to 130 colonies last season, and in a dry year when bees in the mountains were starving to death. All are in splendid condition and the most of them in two story hives and extra heavy with honey. He is selling them to good advantage this season to mountain bee keepers to restock their apiaries.

Mr. J. Fox has a mountain apiary and a valley ranch three miles south of Santa Ana. He always keeps some bees on his valley ranch. He moved a part of his mountain bees down to the valley last season. He lost about one-half of those left in the mountains, and now he is moving bees up from the valley to restock his mountain apiary. You must know that nuclei of two and three combs will winter here just as well as a full colony. I have said, and still believe, that bees are self-sustaining in all seasons, if properly managed. Mr. McIntyre, at the convention in Los Angeles, if I mistake not, made the statement that he fed but very little the past season, and considered his bees in very good condition. His plan is my plan, or my plan is his plan, I care not which way you take it. That is, never to extract after the bees show a disposition to rob. Let them fill up the supers, and let it remain on the hive until next season. It is not lost, for if the season proves to be a good one you can extract just before the flow commences. If a poor one, leave it there and let the bees draw on their surplus as they require. The season can almost invariably be foretold by the amount of rain during the winter that is, if we have a sufficient amount of rain, we can with a certainty expect the bees to store some surplus. We cannot always predict the amount, for that depends a great sight upon the weather, the same as it does in the East or South.

On the above plan the bees cost nothing in a poor season, and in a good season they are almost sure to give us the sweets. Quite a proportion of bee-keepers here extract all they can possibly get, which leaves the bees in bad condition for a dry season.

## THE POULTRY YARD.

### Another Poultry Association.

To THE EDITOR:—Hereafter the Alameda County Association will be known and designated as the Pacific Poultry and Pigeon Association. The explanation is as follows: This association contained a clause in its constitution admitting members from any location, and Alameda being incorporated in its name was a slight handicap on extensive membership; also, the Alameda county members concluded it looked a little selfish on their part and began to cast about them for a more suitable title, and Pacific was decided on as not only very appropriate, but a name that would not in any way conflict with any existing association, for our unwritten motto is: "Malice towards none and charity for all." At our last meeting, on the evening of April 18th, it was decided, by almost unanimous consent of the members present, to incorporate under the State laws. The subscription list was opened and over 800 shares of stock were subscribed for in less than eight minutes. The plan, as now mapped out, is to incorporate with a capital stock of 10,000 shares, with a par value of one dollar each, 5000 of which will be issued as soon as subscribed for and 5000 reserved as a working capital. There is every probability that the entire 5000 shares will be subscribed for inside of sixty days.

When I said that the desire of the association was almost unanimous for incorporation, I did not mean to insinuate that the proposition was not thoroughly considered, for all points of the advantages and disadvantages were exhaustively discussed. However, the most opposition was made from a lack of full understanding as to the liability of stockholders and the protection afforded them, and when these points were thoroughly explained by the committee appointed by the executive committee to consult an attorney and report to the association, all immediately signified their determination of support by subscribing for shares far in excess of what their initiation fee was to have been originally.

The association also decided to hold a show in Oakland as near the 15th of December as practicable. Steps have been taken to secure judges of national repute, and as finances will be arranged so as to have enough money in the treasury to pay the running expenses of the exhibition, it would seem there was no chance for any hitch.

A number of new ideas have been incorporated in our constitution which we are positive will introduce a new stimulus into the industry. One of these is a guarantee of the association as to the integrity of its members, complaints being made to the secretary and, if substantiated, the member will be suspended or expelled, according to the extent of his error.

Another article allows the board of directors to provide for monthly meetings of the association as a club to discuss matters of interest in breeding, etc.; no official business being done at such meetings. In time, as the association progresses, it may provide for a "free library" of works on poultry, in connection with many other lesser advantages which have been suggested. JNO. F. MECKLEN, Secretary.  
No. 417 Sacramento St., S. F.

## CEREAL CROPS.

### The Wheat of the World.

In a recent issue of the *Oregonian* there is an interesting statistical review of the wheat situation in the world at large. Allusion is made first to impressive figures, collated by the *American Economist*, upon the wheat production of all countries in 1891 and 1894, showing the economic cause for the reduction of price. The wheat harvest of 1894 was 220,000,000 bushels larger than in 1891, the increase in Europe being 330,000,000 bushels, in Australia 10,000,000 bushels and in South America 55,000,000 bushels. In Africa and Asia there was practically no change in the supply, but in North America there was a decrease of nearly 20,000,000 bushels in Canada and over 150,000,000 bushels in the United States. Meanwhile home consumption of wheat fell off with the hard times 70,000,000 bushels. Our per capita consumption of wheat in 1891 was 4.58 bushels; in 1892 it increased to 5.91 bushels per head of our population; but in 1893 it fell again to 4.85 bushels per capita. Notwithstanding the fact that the North American continent produced 173,000,000 bushels less wheat in 1894 than in 1891, the export price of wheat fell from 93 cents a bushel in 1891 to 63½ cents in June of 1894. Nothing can account for this but competition of cheap land and labor in other countries.

Of course, these are extreme statistics, since 1891 was the year of the European crop failures and of the greatest yield ever known in America, but their general conclusion is confirmed by the statistics of *Beerbohm*, a notable English authority, for a long

series of years. These figures are arranged, besides, in four-year groups, to eliminate temporary causes and effects. The average for the four years ending with 1894 was 2,437,000,000 bushels; for the four years next preceding it was 2,232,000,000, and for 1883-1886, inclusive, it was 2,096,000,000. Here the heavy American yield and the European famine neutralize each other as do the exceptional years 1891 and 1894 in the United States. Still, the average for the last four years falls short of the world's production in 1894, which was 2,590,000,000 bushels. Reckoning from the middle of each term, there was an increase of 16% in the eight years and nearly 10% in the later four years, showing a gain in the rate of increase. *Beerbohm* estimates the consumption of the last four years to have been 133,000,000 bushels less than the production, after making an allowance of 16,000,000 bushels for annual increase in the world's consumption, instead of the 12,000,000 increase allowed by other authorities.

Here is an enormous accumulation of unconsumed and unsold stock, which is constantly pressing down price, and which is constantly added to by annually increasing production. In spite of the great decrease of wheat production in the United States, increase in countries where land and labor are cheaper carries the world's production up over 50,000,000 per year. Capital and labor are attracted thither, and the result is a relative crowding to the wall of the producers elsewhere, to whom the cost is nearly the same as formerly. From one year to another the quantity raised varies with the character of the season, but the tendency is to a steady gain, other things being equal. Really, there seems no escape for the American wheat grower except in cheaper production or a home market.

## THE FIELD.

### Alfalfa Growing in San Bernardino.

*George Cooley, Colton.*—I have raised alfalfa for twenty eight years; have about forty acres at one time; as it gets foul with grass, I plow and sow elsewhere. The land on which it is sown is called here "bench land," some distance from and higher than the bottoms. The soil, as shown by well boring, is about the same as the surface, for many feet down: "bench land" has no hardpan. Water is reached at about thirty feet, the soil being dry all the way down. My well for domestic purposes is seventy two feet deep, and furnishes an abundant supply. To prepare for alfalfa, plow the land, and level it to facilitate irrigation, harrow with an ordinary harrow; sow broadcast from eighteen to twenty pounds of seed per acre; cover with a smoothing harrow. With us the time for sowing is when the rainy season begins, about November 1. On land surface worn with other crops alfalfa will do well, on account of its deep roots, but weeds come up so thick on some lands as to apparently smother the plant. Mow in April, and, unless there has been a dry winter, the rains will make that crop. As soon as hauled off, we thoroughly soak the land by flooding, and in a month or five weeks cut again, depending on the quantity of water. My method is to turn the water into a reservoir at night; next day turn the stream (130 inches) on the fields, and about seventy more out of the reservoir, making 200 miners' inches, all in daylight. Water is obtained from the Gage Canal Company, supplied from the wells, without pumping, as one of these wells flows 200 inches. As a rule, no more water is needed the first year; some localities need irrigating twice for every crop.

After the first year, I cut five crops—sometimes six. If hay is for horses, cut when it begins to bloom, and earlier for cows. Cut two crops; then let it ripen for seed; where it is too thick, it does not seed well. Cut the seed crop with a reaper, and stack; thresh with an ordinary thresher, provided with the necessary screens. Rake as soon after mowing as the rake will take it, as it keeps its color best when made into windrows. The spring crop I stack in narrow stacks, broadside to prevailing winds; in summer, any way, as it is ready for baling in a month. Baling costs \$1.50 per ton; light bales are used. From eight to twelve bushels of seed per acre is the average yield; threshers charge one-sixth. The range of prices per ton of hay has been from \$6 to \$12, baled seed, from eight to twelve cents per pound.

Alfalfa makes good pasture for hogs, if they can be prevented from digging up the roots, of which they are very fond. It is, indeed, good pasture for horses and sheep from November to March, when we prepare for cutting. Hungry cattle turned on the pasture while the dew is on will bloat. Open their mouths and throw a handful of salt down their throats; it is the best remedy I know. Alfalfa grown on "bench land" is considered better and sweeter. The threshed straw is very poor feed. I had alfalfa on one field for twenty five years, but it became foul; plowed it up this year and planted to corn. The better the crop is treated the sooner it will attain its best yields. Plow with a sharp plow, and there is no trouble in ridding land of alfalfa.



## Patrons of Husbandry.

### A Live Grange, and the Reason Why.

I shall have in this letter the pleasant task of telling about a Grange which for upwards of twenty years has been a potent and useful agency in the life of its community, which has wisely adapted its energies to new conditions as they have come about and which is to day more effective, more prosperous and more beloved than at any former time in its career. Two Rock has never been an imposing figure in the California Grange world; it has not like Sacramento, like Stockton, like Santa Rosa, like San Jose and others been a cradle of Grange leaders; it has not been distinguished by sensational events; it has not had the backing of a large town or the support of a rich membership; it has made no boast of special brilliancy in its ranks; but to-day it is the most alive of all the Granges in the California jurisdiction. While larger, richer and more conspicuous Granges are lagging in their work and at their wit's end as to how to keep up the Grange interest, Two Rock is successful and useful and almost as firmly established in the affections of Two Rock valley as the pretty church which stands just over the way from the Grange hall.

Of the half-score or more Granges started in Sonoma county in the early seventies, Two Rock seemed least likely to have long life. All the others were situated in towns of considerable size, while Two Rock was remote and alone, its only neighbor being the church mentioned above. Indeed, there seemed no more reason for establishing a Grange in the place which has always been its home, than on any other of the ten thousand hillsides in Sonoma county. The special locality was selected because it was for sale cheap. The Grange bought it—an acre or two of ground with a house upon it—and so, almost from the beginning, Two Rock has had its own home. The original building was a mite of a cottage with only one room and a lean-to, but it did well enough and many a happy Grange meeting did it shelter. After some time the Grange saved money enough to provide itself with more expanded quarters and an addition was built on—an addition so large that the original house is a mere attachment to the newer part—and just now a contract has been let to add thirty feet to this addition, which will give a meeting-room something like sixty by twenty-five feet. The hall is beautifully furnished, with desks, chairs, etc., in the meeting-room and a complete kitchen and dining-room service in the older part of the house. For all this there is not a dollar of indebtedness; and there is more than enough cash on hand to pay for the addition about to be made.

I asked a brother how much this place had cost; and I thought his answer very significant: "Well," he said, "that would be pretty hard to say. You see, we all regarded it as a kind of home affair and nearly every member did some work in connection with it, which, of course, did not figure in the construction account. All the digging, hauling and such other work as could be done by ourselves was done free, so that the cash outlay represents only a fraction of the real cost of the place." Here, indeed, was a better answer than I expected. This Grange hall was "a kind of home affair"—a thing brought into existence not so much by money outlay as by the affectionate labor of the community. I ceased to wonder why Two Rock prospered while other Granges languish, for the thing a community loves—a thing that is built up and nurtured by popular affection—be it

Grange or church or what not—never fails to thrive.

Until three years ago—when the system of co-operative buying was instituted—the methods of Two Rock Grange did not differ materially from those of other Granges; its work was chiefly ceremonial, social and educational; but somehow from the beginning it was contrived to interest the most active and efficient men and women of the community. The meetings were held, not on Saturday—always and everywhere the busiest day of the seven—but in midweek, when people have time, if ever they have it, and when a half day's rest is good for both man and beast. Again, people who started for the Grange never got switched off by rival interests. There was no town with its trading places, its centers of sociability and gossip to keep people out of the Grange meeting. When they arrived at the hall there was no temptation to loiter about or go somewhere else, for there was no other place to go. Then for some reason—probably these very reasons just named—it became a point of honor with the officers of Two Rock to be well up in the Grange work. For some years almost the only Master of a subordinate Grange who was dead-letter-perfect in the work, *without the book*, was the Master—now a highly-respected Past-Master—of Two Rock Grange. Under the stimulus of such an example, the whole official staff grew studious and careful. Long ago an old and devoted Patron—one of the honored white heads of the Order—said to me that he had enjoyed a visit to Two Rock better than to any other Grange in recent years, because the officers delivered the work in an interested, intelligent fashion, as if both their minds and their hearts were in it. It was refreshing, he said, to find a set of officers who did not have to hide their faces behind a book. I mention these facts to show how one sort of Grange interest promotes another; also, to show how the example and the force of a capable leader affects all who look to him for guidance. We see it not alone in Grange work but in every other sort of work. A good farmer, prompt in his attention to his business, diligent in his duties, makes a "smart" ranch and promotes the same qualities in all his help; while, on the other hand, a slack farmer makes a slack set of helpers. So it is in any other sort of business—the leader sets the pace and makes the habits of the house. So it is in the State Grange, a Master like Flint or Steele or Johnston puts energetic forces to work all along the line. On the other hand, weakness and inefficiency in the Master's office makes lithargy elsewhere. This principle should always be in the mind of the State Grange at its election of officers—especially at the meeting this fall—for the very life of the Grange in California is dependent upon the wisdom of its selection.

While Two Rock Grange has always been prosperous, its really best work has been done during the past three or four years—at a time, singularly enough, when the dry rot has been making its most serious ravages in the ranks of the Order, generally speaking. It came about chiefly through the adoption of what is called the "Pennsylvania Plan" of co-operative buying. The aggregate cost of domestic supplies—clothing, groceries, feed, etc., etc.—bought each year by the hundred or more members of Two Rock Grange runs high into the thousands of dollars. It is a well-to-do region; the people live in good houses, eat good food, wear good clothes, use improved machinery, and are constant buyers of wagons, carriages, harnesses, etc., etc. It occurred to some of the brothers that a big saving might be made if they could arrange to do their buying in common; and after a good deal of discussion the project was put to practical test. A committee, of which Bro. A. P. Martin was the active spirit, took the matter in hand and the result was a surprise to the most sanguine. Arrangements were made with dry-goods houses in

Petaluma by which a gross saving of 15 per cent was made on all purchases of clothing, etc. Terms better still were made with the wagon repairers, horse-shoers, etc. In the matter of groceries, an arrangement was made with a wholesale house in the city to sell to the order of Two Rock Grange at the same prices quoted to retail merchants. All these arrangements were ratified by the Grange, and for four years they have been in successful operation. The day of my visit—a week ago last Thursday—was "Distribution Day," and I had the opportunity to see the work in practical operation. At the last previous meeting the purchasing committee—which consists of three brothers, all of whom are men of business experience—had taken orders for groceries, and on the day of my visit they were to be given out. All whole packages were left at the depot at Petaluma to be called for by the individual purchasers, but lots to be broken were brought to the Grange house and there divided. The invoice included a wide range of domestic supplies, and the work of breaking bulk and separating into private lots was no small job. With the stuff came the bill, and I was allowed to examine it. It was most instructive in that it showed a saving ranging from ten per cent upwards. The smallest percentage was of course on such staples as coffee, sugar, flour, etc.; but when it came to such articles as baking powder, shoe blacking, brooms, cornstarch, etc., etc., the figures were startling. Here are a few of the prices paid by the members of Two Rock Grange under the co-operative system of buying:

|                             |                      |
|-----------------------------|----------------------|
| Royal baking powder.....    | \$1.92 per 5-lb. can |
| Extra quality brooms.....   | 17¢ each             |
| Pink beans.....             | 3½¢ per lb.          |
| Best Costa Rica coffee..... | 28¢ per lb.          |
| Best cream tartar.....      | 30¢ per lb.          |
| Chocolate.....              | 20½¢ per lb.         |
| Cornstarch.....             | 6½¢ per pkg.         |
| Bottle bluing.....          | 25¢ per qt.          |
| Corn.....                   | 20¢ per can          |
| Tin ginger.....             | 10¢ per ½ lb.        |
| Best Eastern hams.....      | 12½¢ per lb.         |
| Rock candy drips.....       | \$2.25 per 5 gals.   |
| Lard in pails.....          | \$1 per 10 lbs.      |
| Mustard.....                | 15¢ per ½ lb. tin    |
| Roller oats.....            | 3½¢ per lb.          |
| Pepper.....                 | 25¢ per 1-lb. tin    |
| Sago.....                   | 45¢ per lb.          |
| Soda.....                   | 6¢ per lb.           |
| Island rice.....            | 4½¢ per lb.          |
| Sal-soda.....               | 7½¢ per lb.          |
| Canned tomatoes.....        | 75¢ per doz.         |
| Cotton twine.....           | 4¢ per lb.           |
| Nutmegs.....                | 80¢ per lb.          |
| Big tin box matches.....    | 70¢                  |
| Duryc's starch.....         | 50¢                  |
| Best French blacking.....   | 4¢ per tin           |
| Granulated sugar.....       | 4½¢ per lb.          |

I have named only a few items, but they illustrate the economy of the system. I will only ask those who read this to compare the prices here given with the prices they pay for similar articles in their local stores. The whole bill for groceries was \$186.28, upon which the gross saving amounted to upwards of \$60. Sixty dollars in these times—as in any times for that matter—is a good deal of money and it is much better in the pockets of the Two Rock farmers than in the pockets of the Petaluma storekeepers—at least that's the view of it held by the Two Rock Grangers. It is manifestly inconvenient to buy clothing and miscellaneous dry goods in this wholesale fashion, for in these things the elements of fit, fashion and personal taste enter; and it is for this reason that such purchases are not included in the general ordering. They are made at certain stores in Petaluma which allow a discount of fifteen per cent to the Two Rock Grangers. In the course of a year this discount amounts to a pretty penny. One member told me that the aggregate of his dry goods discounts for 1894 was between \$30 and \$40, and that in very many cases it was much larger.

The system is a simple one. Each year a "purchasing committee" of three is chosen. At periodical times this committee calls for orders, and when they are in they buy the goods, make up the individual accounts and collect at the time of distribution. The system is strictly cash, and by it, in addition to the prices above given, there is a general discount of three per

cent, which more than pays the freight from San Francisco. The purchasing committee, like other officers of the Grange, serve without pay, the business experience gained in the work being deemed quite compensation enough. I surmised that such a system would probably be dependent upon the enthusiasm of some tactful and devoted brother; but upon inquiry was told that this was not the experience in Two Rock Grange. There have been several committees during the past four years and each has done its work efficiently. Of the hundred members of Two Rock about sixty patronize the co-operative system of buying, and all who use it are enthusiastic in praise of it. It is only fair to say that I talked with one brother who condemned the system on the ground that it was unfair to the local town, but he admitted that he was hopelessly in the minority and that those who did their buying through the Grange saved money by it. He admitted, also, that in making the Grange profitable it also made it popular. The community is not a large one, and the Grange membership includes nearly everybody in it. "We can't expand much," said one member, "because we've already got in the Grange almost everybody about here. But we don't often lose anybody unless they die or move away."

Two Rock Grange is late getting to work on "Distribution Day," and as I had to catch a train seven miles away, I had, after the business observations of the day, only a few minutes in the formal meeting. But in those few minutes I saw that the attendance was large and made up of just such wholesome folk as make the best sort of grangers.

As I hurried away from Two Rock over the picturesque country eastward to Petaluma my thoughts went back to where I spent a day the week before inquiring into the causes of the decline and failure of Dixon Grange. I recalled its story of a brilliant beginning, followed by neglect of opportunity and by discouragement degenerating into a useless and wearisome routine and ending in decay and dissolution. I contrasted that career with *this*; and it did not require much philosophy to determine which was the better way.

ALFRED HOLMAN.

### Millville Grange Inspection.

TO THE EDITOR:—Millville Grange is located in Shasta county, about twelve miles northeast from the town of Anderson and about the same distance from Redding, the present pushing county seat of the county. It is, by a hundred miles, the northernmost Grange in the State, and is in the district presided over by Inspector Shoemaker. The visit having been arranged for April 20th, the Inspector, accompanied by Deputy Frisbie and the writer, boarded the north-bound train at Marysville on Friday evening, the 19th, bound for the vicinity of Mt. Shasta.

It is, of course, well known that the route is through the Sacramento valley lengthwise, or so much of it as lies north of Marysville, but that the distant reader may have a clearer perception of the region, I may be pardoned for alluding to the scenes as witnessed from the car window and as known to exist beyond the eye's vision.

The hundred-mile stretch is not new to me and yet with every view I get, its charms and matchless fertility seem enhanced many fold over former visions. It is one of the most interesting sections of our State, and one that has never received justice at the hands of competent writers.

The valley portion from Marysville is a hundred miles in length and half as wide, and is bordered on the north, east and west by fertile foothills which ascend beyond to the level of eternal snows. The valley is cut in two lengthwise by the Sacramento river, navigable to near the base of Mt. Shasta; and each half strip is again cut in two

(Continued on page 282.)



## THE HOME CIRCLE.

## Full of Beauty.

Here's the beauty of the meadows—stretching far and far away,  
And the tinkling of the dewdrops on the daisies every day!  
And the sun is growing brighter as it streams from east to west,  
And the heart is growing lighter and the love is growing best.

Here's the singing of the mocking birds; why, when the day ain't bright  
They keep their mellow music, and they sing to you at night!  
And the groves become all-glorious, and the hills assume a light  
That is splendid for the singing for the mocking birds at night!

Here's the greening of the maples, with their twinkling, tinkling leaves,  
And the silkworm with the beauty and the wonder that he weaves!  
And "here's your lady's dresses!" and the spider webs, like milk,  
And the whole world is in purple, and in scarlet, and in silk!

Oh, the world is growing brighter, no matter how it rolls!  
The sunshine's streaming whiter through a million trillion souls!  
And there's nothing like the present, and there's nothing like the past,  
And it's all so mighty pleasant that we wish that life would last!

Selected.

## The California Poppy.

Capit de Oro.

The satin vesture richer is than looms  
Of Orient weave for raiment of her kings.  
Not dyes of olden Tyre, not precious things  
Regathered from the long-forgotten tombs  
Of buried empires, not iris plumes  
That wave upon the tropic's myriad wings,  
Not all proud Sheba's queenly offerings,  
Could match the golden marvel of thy blooms.

For thou art nurtured from the treasure veins  
Of this fair land: thy golden rootlets sup  
Her sands of gold—of gold thy petals spun.  
Her golden glory, thou! on hills and plains  
Lifting, exultant, every kingly cup  
Brimmed with the golden vintage of the sun.

—Ina D. Coolbrith.

## An Early Call.

He proposed to her in the conservatory after supper; he did not go down on his knees or declare life would be nothing to him without her, but he told her, simply and earnestly, that she was very dear to him—that he had always loved her, and that as his wife it would be his care to guard her from the world's rude buffetings. "I think I could make you happy," he said. "I am not as clever as some of the men you know, but I love you."

"Yes," she murmured, "I know you love me—you have always been good to me; you must know—you must feel—that I appreciate it. It touches me to have you care for me—I wish that I could make you understand that I am grateful."

"Grateful! But why should you be? Could I help loving you? Could I know you and not care for you? You are so unlike other women, so free from envy and petty malice. I have watched you with your girl friends; I have seen you do many a kindness that you thought nobody knew anything about. I think it was your goodness that charmed me first."

She looked up. Was he really in earnest?

"Don't praise me," she said. "Compliments from other men are well enough, but not from you."

"Is it a compliment to tell you what I think? And it seems to me I have said so little. Ah! if you knew what is in my heart, but no doubt," as she made an impatient movement, "you have heard all this before—a twice-told story wears. What can I say to win you—you are so used to being loved? To another woman I might speak of my wealth—of all that I could give her—but not to you."

"You think too well of me," she broke in.

"No, Edith; I understand you, and that is why I want you all for mine, to have and to hold, to love and to cherish. Say that you like me a little—that you will be my wife."

She leaned toward him. The words that would send him from her and end

forever the friendship that had become a part of her life were trembling on her lips when he, guessing her intention, perhaps, said hurriedly: "Some one is coming—your German partner, I think. Don't answer me now; later on will do as well."

She breathed freely. It was natural for her to postpone unpleasant things—to put off the evil day as long as possible.

"As you wish, then. Will you call to-morrow?"

"Yes, in the morning, at 11." He bowed and withdrew just as her next partner came hurrying up.

"The cotillion is about to begin, Miss Alton," he said, taking Manning's chair, "but I think we have time for a short chat. You don't mind talking to me for a few minutes, do you?"

"Why, no," she answered, for she liked the lad not only for his own sake, but because of his friendship with that other, whose image was never long absent from her mind.

"By the way," he said, as if reading her thoughts, "I got a letter from Agnew to-day. I thought you might care to hear from him; you always seemed such friends."

"Yes," she responded, idly. "How is he?"

"Very well, but growing homesick. Think of it! He has been away six weeks."

"No doubt he is enjoying himself."

"Oh, Carl will always get the best out of life. That's the way, you know."

"Yes, I know." The answer was given so carelessly, with such apparent indifference, that he was about to speak, to tell her the tidings that his letter contained, and which so far some instinct had made him withhold, when his hostess appeared in the doorway.

"Come, you two," she called, "the others are waiting for you."

"Dear Mrs. Danton," said the girl, rising, "Mr. Lane and I are such old friends that we sometimes forget how time flies."

"You young dissembler," laughed the older woman, "you know Herbert Manning was in the conservatory with you."

A sudden blush stained Edith's cheek. She hated herself for it; it was so apt to mislead. But Mrs. Danton seemed in no way surprised.

"There, child; don't look so frightened," she said. "No one wishes you happiness more than I."

"But, Mrs. Danton—"

"Really, Miss Edith," put in Lane, who had been a puzzled and uncomfortable listener, "I don't like to hurry you, but we shall surely be late."

She turned away; after all, what did it matter; by to-morrow the world would know the truth, Manning's face would tell the story of his rejection and a few hours' misconception could harm no one. But late that night, when she stood in her own pretty room, she felt vaguely dissatisfied with herself; she could not put the feeling from her.

"I have not acted honestly," she said aloud. "I should have answered him; it was not kind to put him off; it may lead him to hope; he may have misunderstood me." She was silent a moment, then went on still contritely: "And I do like him. He is the kindest, truest friend, but love—" She arose and crossed the room.

When she came back she carried a photograph, a man's cold, clever face—the face of one who knew the world and was perhaps not on the best of terms with it.

"But for you," she said, gazing into the unresponsive eyes, "I'd have loved that other man; if you had not shown me so clearly that I was dear to you, I might still care for him, for he loves me dearly; but it is too late now—too late to talk of what might have been." She stooped and laid her lips on the picture's.

The next morning she was idling over her fire, when her maid brought up a bunch of heartsease and a card: "Mr. Manning's compliments, ma'am, and will you see him?"

"Yes; say to him that I will be down in a moment."

When the door closed she lifted the

heartsease tenderly; a mute appeal, they seemed to her, from the giver.

"Poor fellow," she thought regretfully. "I should have told him; however, there is no use keeping him waiting. I might as well get through with it at once."

She pinned the heartsease in the lace at her throat, cast a parting glance at the mirror and started down the stairs.

As she reached the lower hall the front door opened and a servant admitted a girl in gray with a bunch of roses thrust into her muff.

"Why, Edith," she said rapidly, "I never thought to find you down so early. If you are going out don't let me keep you."

"I am not going out; come into the sitting room and get warm."

"No, I won't sit down. I only want to see you a moment. I came to ask you to join our house party—there will only be eight of us, the same old crowd we had last year."

"The same crowd? How delightful!"

"The same, and not the same. I won't invite Mr. Agnew now."

"And what has poor Mr. Agnew done?"

"What has he done? Oh, nothing unusual; they all do it sooner or later; but an engaged man is *de trop* at an affair of this kind. No girl wants him for her partner, and, really, one can't blame them."

An engaged man! For one horrible moment Edith Alton thought she was about to faint; the next, however, the tables and chairs righted themselves, her visitor's face ceased its grotesque gyrations and she was conscious that she was speaking.

"So! Where did you hear that pleasant bit of news?" she asked, seating herself on the arm of a chair.

"Why, last night. Mr. Lane told me coming home. Strange he never mentioned it to you. I am horribly disappointed. Fancy Charlie Agnew married to a Boston girl. You remember her—a terrible little creature who visited the Mores. Wealthy, of course—trust Charlie for that—but oh! so plain."

"Beauty is in the eye of the beholder," quoted Edith, lightly. She felt a longing to cry out, to bury her face somewhere, instead of which she must smile and look unconcerned and discuss this love affair with the indifference of a mere acquaintance. "If I remember rightly, she was a nice little thing."

"Nice? Heavens! Fancy Charlie's coming to that—actually marrying a 'nice' girl! His worst enemy couldn't wish him worse luck. He has disappointed me dreadfully. I thought," significantly, "he fancied some one else, somebody nearer home."

"Somebody nearer home? oh, do you mean myself? How awfully funny! Why, we are very good friends, we have always been friends; but I—" a rapid flash of thought; then, with rising color, "I am going to marry another man."

Her visitor's face expressed intense surprise; "Going to be married," she repeated; "I had not heard—"

"No one has heard," said the other, with some emotion, "and by the way, Mr. Manning is waiting for me in the library. I must ask you to excuse me."

"Mr. Manning!"

"Did you not guess? I thought of course you would. Don't speak of it, Janet. I only told you because (slowly) you are such a good friend of mine."

"And I appreciate it accordingly. I wish you every happiness"—she laid her hand lightly on Edith's arm—"you know that, don't you?"

"Why, yes—you have always wished me well, haven't you? See how potent your wishes have been! But to return to our first subject, I shall be glad to go with you to Arley. Last year's visit was a dream."

"Then I shall count on you. Come, you will have to let me out; I am not *au fait* with your lute."

"What a strong wind there is—draw up your wraps. Good-by, and again I thank you for thinking of me."

The front door slammed and Edith

stood a moment in the hall, gathering courage for what was to come; then she turned and went into the library.

Manning, who was standing at a distant window, came forward at her entrance.

"I was afraid I kept you," she said, giving him a trembling hand, "but I was detained by an early 'call' from a friend."

"An early call," he repeated; "then what do you think of me?"

"Ah, but I told you to come: that is altogether different. I wanted you."

"You wanted me?" he cried eagerly: "my darling, may I interpret that after my own fashion? Do you really care for me a little while?"

She could not speak, but for answer she came to him, laying her beautiful head on his breast.

"Love me," she whispered, passionately; "only love me and you can make of me what you will."

"Do you know," he said to her, about an hour later, "at first you frightened me, but when you didn't say 'No' at once, I began to hope. I knew it wasn't like you to keep me in suspense—you are too true of heart for that."

"Too true," she thought, remorsefully. "Oh, Herbert, Herbert."

But aloud she said, smiling half sadly into his loving eyes: "To think of your being afraid of me—of poor little me—who am not half worthy of you!"

## Fashion Notes.

Black and white effects are to be as popular as ever this season, and black and white striped silks will be well represented among the summer gowns. But the stripes are narrower and closer together than they were last year. Black lace and black velvet ribbon are used to trim white muslin gowns, and one feature of this combination is an immense bow of black velvet ribbon on one side of the front of the bodice at the edge of the yoke and quite close to the sleeve.

Abundant foliage is a feature of all the floral decorations for millinery use, and many shades of the same flower are seen on one hat. The hydrangea is a favorite blossom, and is produced in all the various tints in which it grows.

A straight-brimmed hat is trimmed with parrots' breasts forming a bow across the front, a bunch of white pansies in the center and a bow of shot green and brown ribbon.

Silk linings are as popular as ever, and are by no means the serious matter of expense they once were. It now costs about half its former price, and in excellent qualities at that; but to buy cheap, inferior silk for a lining is a mistake. It soon cuts, and the constant repairs needed are vexatious, to say the least.

Long cloaks for very small maids are made of bengaline, crepon, silk and pique. One of the new varieties is shown in green crepon, lined with finely striped silk, and made with a Gretchen waist and a flaring skirt put on to the waist plain in front and pretty miniature godet plaits in the back. A band of cream lace is arranged *bretelle*

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fashion over each shoulder, where it separates into two little points, between which and on top of the puffed sleeves are rosette bows of green satin ribbon. A band of ribbon over the shoulders meets in front in a bow and hangs in long curls nearly to the edge of the skirt.

#### Curious Facts.

The Old Testament contains thirty-nine books, 929 chapters, 23,214 verses, 593,493 words and 2,728,100 letters.

The Duke of Bedford has imported two thousand frogs from America to free the ponds of his estates from parasites.

The Chinese divide the day into twelve parts of two hours each. The Italians reckon twenty-four hours round, instead of two divisions of twelve hours each, as we do.

It is calculated that if the children under the care of the London school board were to join hands they would reach from London to Carlisle, a distance of three hundred miles.

The presence in the sick-room of flowers with delicate fragrance is generally beneficial. Certain colors are said to act favorably upon the nervous system. Red blossoms are stimulating, while delicate blue flowers are soothing.

Greater New York, a topographical statistician points out, will cover an area of 317 square miles; three times the size of London and twelve times that of Paris; Rome, Babylon and Memphis are not to be mentioned in the comparison.

In Paris the practice of doctoring fruit by coloring is quite common. The latest development of this business is in connection with pears, which are dyed red over a third of their area and blue below, thus making the national colors when peeled.

The thumb, according to professional palmists, is an unerring index of the mind. If a person is trying to deceive you he will invariably draw his thumb in towards the palm. On the other hand, if he is telling the truth the thumb will be relaxed and point away from the palm.

The production of distilled spirits in the United States in the fiscal year ending June 30, 1891, was 117,186,144 gallons, of which 29,931,415 gallons were in bourbon whisky, 14,345,389 gallons in rye whisky, 12,260,821 gallons in alcohol, 1,784,312 gallons in rum, 1,223,725 gallons in fruit brandy, and 35,356,126 gallons in pure neutral or cologne spirits.

"Every household," says a woman, "should own a flag, just as much as it should have bed linen," a sentiment that will find few dissenters. The flag should not only be owned, but put out on every occasion on which there is the least excuse. Patriotism is inborn, to be sure, but lots of inborn sentiments need development and fostering. Love of country is one of the things that we cannot bring out too early or have too strongly demonstrated.

It is reported that thirty-six tons of caterpillars and, a large number of cocoons—in all 35,000,000 insects—were destroyed in the effort to drive the pest from the young plantations of trees on Hong Kong Island. They appeared on the pine trees with which the Government is trying to reforest the island, and lasted for two months. Stations were established, where the caterpillars were received and paid for by weight, and this method appears to have proved as effective as could be desired.

Common salt is one of the most valuable remedial agents the world contains. Used as a tooth powder, alone or with a little prepared chalk, it whitens the teeth and makes the gums hard and rosy. It is a good gargle for sore throat, and if taken in time will benefit, if not cure, diphtheria. It will stop bleeding of the mouth, and in warm water is a good emetic and remedy against several poisons. There is nothing better for sore feet and hands than salt and water, and for ordinary sore eyes, though a painful application, will often effect a complete cure.

#### Gems of Thought.

The bridge is human life; upon a leisurely survey of it I found that it consisted of three-score and ten entire arches.—Addison.

The fineness of a man's mettle is not found in fortune's love, but in the wind and tempest of her frowns.—Shakespeare.

There are two functions of the soul, contemplation and practice, according to that general division of objects, some of which only entertain our speculations, others also employ our actions, so the understanding with relation to these is divided into speculative and practical.—South.

A wit is a very unpopular denomination, as it carries terror along with it; and people in general are as much afraid of a live wit in company as a woman is of a gun, which she thinks may go off of itself and do her a mischief. Their acquaintance is, however, worth seeking, and their company worth frequenting; but not exclusively of others, nor to such a degree as to be considered only as one of that particular set.—Lord Chesterfield.

Every man is not a proper champion for truth, not fit to take up the gauntlet in the cause of verity; many from the ignorance of these maxims, and an inconsiderate zeal for truth, have too rashly charged the troops of error, and remain as trophies unto the enemies of truth. A man may be in as just possession of truth as of a city, and yet be forced to surrender; 'tis therefore far better to enjoy her with peace than to hazard her on a battle; if therefore there rise any doubts in my way, I do forget them, or at least defer them, till my better settled judgment and more manly reason be able to resolve them.—Sir T. Browne.

—Inquiries after happiness and rules for attaining it are not so necessary and useful to mankind as the arts of consolation, and supporting of one's self under affliction. The utmost we can hope for in this world is contentment; if we aim at anything higher we shall meet with nothing but grief and disappointment. A man should direct all his studies and endeavors at making himself easy now and happy hereafter. The truth of it is, if all the happiness that is dispersed through the whole race of mankind in this world were drawn together, and put into the possession of any single man, it would not make a very happy being. Though, on the contrary, if the miseries of the whole species were fixed in a single person, they would make a very miserable one.—Addison.

#### Iron Older Than History.

Iron was used before history was written. The stone records of Egypt and the brick books of Nineveh mention it. Genesis (ix., 22) refers to Tubal Cain as "an instructor of every artificer in brass and iron," and in Deuteronomy (iii., 11) the bedstead of the giant Og was "a bedstead of iron." The galleys of Tyre and Sidon traded in this metal; Chinese records ascribed to 2000 B. C. refer to it; Homer speaks of it as superior to bronze. The bronze age came before the iron age, because copper, found as a nearly pure metal, easily fuses, and with another soft metal—tin or zinc—alloys into hard bronze; while iron, found only as an ore, must have the impurities burnt or hammered out by great heat and force before it can be made into a tool. The word sometimes translated "steel" in our English Bible really means bronze or brass, but steel was distinctively known to the later ancients. Pliny the Elder wrote in the first century of our era: "Howbeit as many kinds of iron as there be, none shall match in goodness the steel that comes from the Seres (Chinese), for this commodity also, as hard ware as it is, they send and sell with their soft silks and fine furs. In a second degree of goodness is the Parthian iron." Asia probably made more iron and steel thirty centuries ago than it does to-day. About the time of the first Olympiad, 779 B. C., there is authentic record of the use of

iron in Greece, and Lycurgus used it for the money of Sparta. Iron and steel weapons of war began to displace those of bronze before the battle of Marathon. The Romans learned iron making from the Greeks and the Etruscans, their mysterious and highly civilized neighbors, and obtained iron largely from Corsica, where the mines had been worked from prehistoric period. The Roman legionaries found in Spain steel weapons of the finest temper, and Diodorus says that the weapons of the Celtiberians were so keen "that there is no helmet or shield which cannot be cut through by them." Toletum (now Toledo) was then as famous for its sword blades as afterward in the middle ages. Cæsar found the painted Brittons fighting with spearheads of bronze, but wearing armlets of iron, and remains of pre-Roman forges are still found in England and Wales. The Germans knew the art of sword forging, and their legions of dwarfs and trolls with magic swords point to an earlier people, adepts in mining and metallurgy.

#### How To Use Old Newspapers.

When spring cleaning time arrives old papers are called for to put under the carpet. Several layers of them make a good carpet lining, and if a thicker padding is desired, straw can be used between two layers of paper. This makes a very elastic lining and a very inexpensive one, which can be renewed every season. Cut in long, narrow strips, old paper makes good stuffing for chair cushions and pillows. It may not be equal to down, but it is quite as good as inferior hair for this use.

Several thicknesses of paper placed between cotton batting make a warm, light bed-comfortable, and iron holders and kettle holders are made in the same way, the paper being laid between and the whole covered with calico.

On very cold winter nights we put a newspaper coverlet over our house plants, and never have known them when so protected to be pinched by Jack Frost's icy fingers.

It was an old nurse who found out how to replenish noiselessly a coal fire in the sick-room. She had the coal brought to the room in a strong newspaper with the corners gathered up and tied. When fresh fuel was needed she could place the paper just as it was on the fire, with scarcely a rustle. If she could only invent some noiseless method of poking the fire with a newspaper, her name would be held in honor in our household, at least, forevermore.

If you have doors leading to porches, etc., which are not used during the winter, you may find that the wind whistles through, no matter how securely they are locked and bolted. Fold newspapers in long, narrow strips and press them firmly in all cracks with a thin-bladed knife, and the whistling wind will not trouble you again from that source. If you find it stealing in beneath the window sash, raise the window, place a fold of paper on the sill, then close and lock the window.—Philadelphia Times.

"What if I were one of those husbands, my dear, who get up cross in the morning and bang things about and kick like everything just because the coffee is cold?"

"John," responded his wife, "I would make it hot for you." As her words admitted of more than one interpretation, John said nothing more about his coffee.—American Youth.

## DOMESTIC ECONOMY.

### Hints to Housekeepers.

Salt on the fingers when cleaning fowls, meat or fish will prevent slipping.

Save the covers of your lard pails to place beneath pots and saucepans when the stove is too hot.

For hands that perspire excessively, bathing the hands several times a day with hot infusions of white oak bark is recommended.

English is fast becoming the polite tongue of Europe. Mullhall claims the number using the English language in 1893 at over 117,000,000.

The very best way to wash mirrors or window glass is to sponge the surface with alcohol and dust it with whiting, and finally polish it off with a chamois skin or soft cotton cloth. Paint is best removed by alcohol and the friction of a penny, the edge of which is never sharp enough to scratch.

Breadcrumbs crushed to a coarse powder are admirable to clean delicate lamp shades, screens, pillows, fringes, scarfs and panels made of bolting cloths and numerous other articles whose decorative office is sadly curtailed from the delicacy of their materials and their hitherto difficult cleansing. The spot to be cleaned must be spread on a flat surface and the crumbs laid on it; then, with a soft clean cloth, these are rubbed around and around with even strokes. The crumbs must be frequently renewed, and the bad ones thrown away, and a fresh layer put on. When the cleansing operation is over, a light shaking or a brushing with a soft, fine brush removes every vestige of crumb dust, and the result, even in the most fragile and delicate of fabrics, is most satisfactory.

### Kitchen Lore.

**EGG CURRY.**—One egg, two table-spoonfuls sugar, one-half cup strong vinegar, one teaspoonful butter, one-half teaspoonful salt, one teaspoonful ground mustard, one teaspoonful curry mixed in cream. Mix mustard, salt, vinegar and curry, and pour on the well-beaten eggs. Simmer all for ten minutes. This will keep for a month in a cool place.

**PICKLED EGGS.**—Boil one dozen eggs hard for fifteen minutes; then remove shells and stick about half a dozen cloves in each egg. Have heating to a boil one quart of good vinegar (the whitest procurable), half cup sugar, small bag spices. When eggs are ready pour this over them, and cover closely. They will be ready for use in a few days, but will keep for a week or two.

**BAKED EGGS.**—Place a layer of stale bread crumbs in the bottom of a buttered dish, and pour over enough sweet cream to moisten. Slice hard-boiled eggs and put a layer with plentiful dots of butter and a little salt and pepper. Continue alternate layers until the dish is full. Sift crumbs over the top, dot with bits of butter and set in the oven to bake.

**EGG RAREBIT.**—Take the whites of the above hard-boiled eggs; chop fine with a half dozen mushrooms. Put a heaping tablespoonful of butter in a frying pan to melt, and add one tablespoonful of flour and mix till smooth. Stir in one-half pint of cream, and stir till boiling; season with salt and pepper and a little curry, then add the mushrooms and let stand about three minutes. Serve hot.

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## Millville Grange Inspection.

(Continued from page 279.)

by a railroad to a junction near the head of the valley.

On the east side we have the flourishing towns of Marysville, Live Oak, Gridley, Biggs, Nelson, Durham, Chico and Vina. On the west side are situated Willows, Maxwell, Orland, Corning, Germantown, Tehama, Red Bluff and Redding, the latter three beyond the junction of the roads. On the river are situated the towns of Colusa, Princeton, Butte City, McIntosh, Tehama and Red Bluff, exclusive of the landings in front of almost every farm, where supplies are unloaded and farm products are taken on board for the San Francisco and way markets.

There can be no better evidence of the worth and productiveness of this region than the transportation facilities, provided by cautious and far-seeing capital; and yet I may be permitted the assertion that no more fertile region exists on the globe, and positively none where the natural advantages are combined to a greater degree than in the upper Sacramento valley.

The annual rainfall is un failing and much greater than in any other portion of the State, but injury from excessiveness is avoided by the greater number of drainage channels, provided by nature, running from the hills to the rivers, thus insuring natural drainage which is lacking in many other sections.

The valley is at present one vast bed of grain, hay and pasture, as luxuriant as can well be imagined. The acreage to hay or pasture is being lessened by innumerable teams laying the soil over in fallow, hence I judge the grain acreage will be less than average, owing to unfavorable seeding weather. Nevertheless, I predict the transportation lines will be taxed to their utmost to move the harvest to tide water.

The world's greatest ventures by individuals in horticulture were made here. I refer to orchards of General Bidwell and the vineyards of the late Senator Stanford. Other ventures are rapidly succeeding, such as at Rio Bonito, in Butte county, and Riveria, in northern Sutter. If not as large as the former, they are quite as meritorious and successful. The west side, too, is advancing with rapid strides in fruit culture and diversified agriculture, and the final outcome can only be measured by the world's market, as every acre, practically, is adapted to the growth of the finer products of field and garden. A few large ranches are still intact, but the cutting-up process has begun, and finds favor as fast as small tracts are wanted by actual settlers.

North of Red Bluff the valley contracts, or rather becomes undulating, the snow lines being apparently as far apart as farther back. The slopes are covered by a dense growth of timber and underbrush, except now and then an open plain or where cleared away by the settlers.

Mt. Shasta seems but little nearer, although the distance towards it has been reduced at least 100 miles since we started.

What seemed at first sight a grand upheaval out of the great valley of a snow-covered mountain, known to be 14,450 feet in height, is now standing amidst a group of hills and mountains that seem to hide its base and give it support, like projecting walls to a great tower. On either flank these supports rise above the snow line, standing as guards over this northern landmark and the great valley.

Millville and the good people who make up the Grange and the population of the vicinity are situated among the low-lying foothills. It is an old town called into existence by the rush for gold. The supply giving out, the little valleys along the numerous streams were settled by farmers and stockmen. Grain was grown and a grist mill was built and operated for a number of years to supply the miners of old Shasta and the settlers with bread and food. Whatever its former need or success, the enterprise has been idle for a number of years, although it remains standing as of yore. I was

told by an old resident that Jim Keene, once the famous wheat king of Chicago and New York, was at one time a part owner with his father in this enterprise.

The chief industries of the people are stock-raising, poultry and fruits, with as much farming to grain of their best soil as can be consumed at home and in the near-by railroad towns. The largest and apparently the most productive valley is Cow Creek valley, and is like a paradise nestled among the rock-ribbed ridges. The valleys are narrow and long and each contains a tributary rivulet, creek or branch of the Sacramento river; and all as clear as undefiled spring water.

The town contains two stores, a hotel, blacksmith shops, postoffice and several saloons and quite a number of easy residences.

School facilities are ample and the place contains a two-story brick hall, owned by the Masonic and Odd Fellows orders. Of course, in such a community, ample church facilities are provided, and while the populace is far removed from the turmoil of the city and competing railroads, its existence is probably as blissful as falls to the lot of average man.

Our coming brought together a goodly number of happy Grangers, who gave us a merry and fraternal greeting, and in less time than it takes to write it we felt as much at home as in Yuba City Grange. Apparently the word "Inspector" had a deterring effect on some of the members, but the reassuring words of the messengers sent out, saying that he was of medium size, quite peaceably inclined and in company with two former visitors, they came in until the large hall was comfortably filled. Another reason must be given why many brothers and some sisters were a little tardy.

The Overseer, who is Justice of the Peace, was holding court down town; the case had been dragging along for some days, creating much stir in the vicinity. Big lawyers were present from Redding and Anderson; among the latter was none other than my tall friend, T. W. Shanahan.

The case had been transferred from Anderson to this granger court, which amounts to a compliment for the Judge, although it deprived our meeting of his presence.

The assemblage was called to order in due time by W. M. Edington, who invited B. F. Frisbie to the chair. The inspection services were performed by Brother Shoemaker, after which a splendid repast was partaken of by all.

This concluded, the usual after-dinner speeches were indulged in, to the manifest delight of all present.

Brothers Shoemaker and Frisbie exemplified the secret work of the Order and gave much valuable instruction, and the writer being called on attempted to show what the order of Patrons of Husbandry had accomplished for the farmers of the land and what, in his judgment, it was capable of doing for them in the future. He again referred to the present depressed condition of agriculture, and gave some hints looking to a remedy, which he claimed should be the leading topics for discussion by the Grange and all other farmers' organizations. He read from the "Declaration of Purposes," as showing that all such objects are within the powers of the Order, and that their consideration was never more urgent. It was a subject worthy of our combined efforts to solve. He saw no reason for the abandonment of our calling, since the depression is general, and there was no better place than the farm and the Grange wherein to discuss the situation and to work out measures of relief.

Such was inspection day at Millville, and, judging from the manifestations of approval and enthusiasm, the meeting was a profitable one to all present. The descending orb of day gave notice that there must be an end to good things, so, amidst general congratulations over the auspicious event, all repaired to their homes and the visitors "from below" took their departure for Anderson and the train, arriving

at Marysville at an early hour on Sunday morning.

If, in the minds of some readers, the descriptions of the country are wanting in detail and completeness, they are reminded that the observations were had from the car window while the train was moving at the rate of thirty miles an hour, and that for a more complete description both time and space were wanting. Yours, etc.

GEORGE OHLEYEN.

Yuba City, April 25, 1895.

## Details About the Projected Summer Camp.

TO THE EDITOR:—I am pleased to note your approval of the proposal of Highland Grange to establish a farmers' encampment, and in reply to your request for still further information I must say I know of nothing else to be said on the general proposition. Whatever form is finally given to the movement by those who will be in charge of it, the main principle could not be materially different from that outlined by me last week, although the strong character of San Jose Grange as leader would certainly stamp itself on the enterprise in some form. But before assuming the leadership of the movement, San Jose Grange will naturally wish to know something as to the number likely to attend. They won't want to lead if nobody is to follow. It is one thing to "approve" of a movement, and quite another to pack up and go along. Most of us concede the beneficial influence of the Gospel, but a whole lot fail to attend upon its ministrations. The important thing for San Jose Grange to know before accepting the leadership is not so much as to how many believe a camp of instruction is "a good thing," but how many will go there and camp; and as this, like most other things, will finally settle down to a question of money, and what one gets for the outlay, it may very likely be helpful if I make a statement of the advantages and disadvantages of the location proposed and of the necessary expense in camping on the grounds.

The advantages of the location are its altitude (2000 feet) and climate. In summer outings the climate should be different from the home climate. The Santa Cruz mountains afford the most available spots for the bay and coast counties, and the location chosen is the most convenient place in the mountains for a large company. There are hundreds of others just as good, and doubtless better in some respects, as the one selected; but I know of none that is as convenient to all. The evenings, after June and even often in that month, are warm and delightful and suited to outdoor life; the days are sometimes hot, but not as much so as in the interior valleys or in the Sierras at the same altitude, the air being tempered by the sea which is distant nine miles in a direct line and about fourteen miles by the road to Camp Capitola. New roads will soon shorten this distance about two miles, and within a short time a railroad from Soquel will run to within nearly two miles of the proposed camp, thus making frequent visits to the beach a matter of perfect ease. In the meantime we start after breakfast by team, spending the time at the beach during the heat of the day, and returning by a charming road after four o'clock for dinner. Those bringing their teams can make these excursions as often as they please, while for the others the expense will only be the usual charge for a two or four-horse team and driver, the same to be divided among as many as go. This combination of sea and mountain climate makes the vicinity of the camp the most delightful climatically that I know of. I have lived there for twelve years and would not willingly live elsewhere, and I know California and the coast thoroughly.

Scenery.—There is no doubt that farmers are rested, benefited and made happier by a proper cultivation of the esthetic side of their nature, and there can be no one so prosaic as not to be moved and inspired by the magnificent panorama spread out before the camp ground; nine miles to the sea by about fifteen miles up and down the coast gives an area of 135 square miles of redwood forest, stream, orchards, vineyards and farms, the city of Santa Cruz, Monterey Point, and all the sea within the horizon; a walk of five minutes will double the area of vision; a ride or walk of a few miles to Loma Prieta will give what can be seen from an altitude of nearly 4000 feet, including not only the coast view, but the Santa Clara and Salinas valleys. There are far grander views in the Sierras, and especially in the Rocky mountains, and the outlook from many of the little eminences at the east adds to the beauties of nature the charm of historic associations, but if there be any prospect in America more replete with that seductive and restful influence which is afforded by the contemplation of peaceful and productive nature in a wide expanse of land and sea, I have not seen or heard of it.

Surroundings.—The proposed camp ground is a bit of picturesque hillside in the midst of a thriving and thickly settled community as is found in any valley in the State, and yet completely isolated from it. Within a mile of the spot are three churches—two Presbyterian and one Baptist—and two trout streams, the Soquel and Los Gatos. The trout streams, I regret to say, get pretty well fished out by the camping season, but the output of sound orthodox doctrine at the churches is never failing. The attractions of the neighborhood have made it, without advertising, a very well known summer resort for those of moderate means, and to such of the wealthy as are not fashionable or wish to escape from society, as the result of which boarding facilities are abundant, at very moderate rates, within

easy walk of the camp ground for those who wish to take advantage of its privileges, and yet do not care to camp. I regard this as a matter of great importance, as there are large numbers of this class, and a camp ground located at an isolated spot would afford no comfortable provision for them. The presence of a large population which is not only interested in but will be benefited by the establishment of such an institution, will be found not only convenient, but, I think, essential to success. Without far more money than the enterprise can control at first it could not be established except in the midst of some community which will derive special benefits from its location, and can therefore afford to do special work for it. This community is able, and I think will be found willing, to do all that could be expected of it for an undertaking of this kind. It is not able and would not attempt to do all that needs doing, and it does not propose to lead; but it can be depended on to back up a strong leadership from elsewhere.

Supplies.—Among the conveniences of camping amid a settled community are the ease and comfort attending the purchase of the necessary supplies. Any large camp, no matter where situated, would attract tradesmen; but a camp of the kind proposed is quite likely

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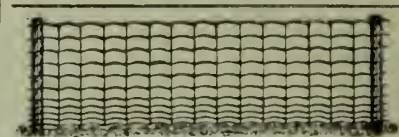


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to have early comers and late stayers, thus not affording sufficient trade to warrant supply men to go out of their regular route. As long as one family remains on the proposed ground they can be sure of the daily visits of those who have eatables to sell, and so they can bring from home as much or as little as they please.

**Water.**—This should be mentioned among both the advantages and the disadvantages of the spot. The traditional camping ground unquestionably has running through it a fine broad stream, teeming with trout asking everybody to come and catch them, whereto the father betakes himself with his pail when water is required, and wherein the youngsters may disport themselves bare-legged all day long; but no such stream that I know of is to be found on any of these mountain tops nor anywhere about them. There is sufficient water for cooking and cleanliness for all that can occupy the ground, but as regards wading and fishing one must go a mile or two. On the other hand, what water there is will run by gravity over the whole camp, and each camper, by taking a hose or a few feet of pipe along with him, can have water at the door of his tent.

It is needless to add that the mails delivered at the camps twice a day will be a convenience, and the telephone will not be long in coming.

There are some minor disadvantages in the locality being considered, most of which are inseparable from any mountain resort. It is four miles from a railroad station. As is usually considered, a camp ground must be so located that a person can step from the platform of the car right onto the grounds. This, however, applies to those picnic grounds which large crowds visit for a day at a time. I do not know that this is any serious disadvantage to the proposed camp, but at any rate there is no escaping from it in these mountains without losing the peculiar advantages of altitude, climate and outlook which are afforded by a mountain camp. The matter-of-fact builders of railroads through mountain districts have the habit of hunting the lowest passes, with no regard whatever to the view afforded from the car windows. The highest point reached by the narrow gauge railroad, which is at Wrights, is only about 800 feet, involving, with a grade of 300 feet to the mile, a trip of four miles to reach the proper altitude—above the fogs. From any other point on the railroad the distance would be longer, or the altitude unsatisfactory. The distance from the railroad will simply add about half a dollar to the expense of those coming by rail. On the other hand, it will enable some enterprising camper coming with his team to pay all his summer outing expenses, by taking passengers back and forth.

I imagine the greatest objection to those unfamiliar with the country, who see the ground in its present condition, is its very rough character. There is hardly enough level land on the tract to make a croquet ground or tennis court, and it is covered with underbrush, the luxuriant exuberance of the poison oak attesting the fertility of the soil. I do not myself think the roughness of the mountain side an objection. On the contrary, it could not be so picturesque without being rough; it is just such a spot as a wealthy man would delight to spend money on, and while, if we had to raise the money necessary to make the grounds accessible, remove the poison oak and otherwise put them in order, we simply could not do it and would not try. When we consider that we propose to do all the work ourselves, and do it gradually, there is nothing difficult about it. The only immediate individual money expense necessarily involved is the laying of a floor for each tent with a railing on the front to keep the kids from tumbling off. The floor, however, properly put down will last for years, and be far more comfortable than camping on the ground. In fact, in these mountains anywhere every tent should have a floor. On the proposed ground the front of the floor, facing the sea, will usually be about three feet above the ground. With lumber at \$20 per M., any one can calculate the necessary expense. It will average about \$10. It would be my proposal for each camper this year to build his own floor and present it to the camp, reserving the right to occupy it whenever he pleased, upon notice, at such a fair rental as may be necessary to pay camp expenses, and otherwise permitting the camp to rent it to others. Some little revenue must of course be provided to cover little expenses, and a small fee for rental, including tent floor, would seem the most feasible method.

The matter of removing the poison oak is a mere trifle. It will be necessary, outside of this community, to raise money to purchase a few thousand feet of lumber and a few kegs of spikes for the road and also a few hundred feet of water pipe. There must also be money to employ about four men for a month grubbing the poison oak and the brush from the road. The rest will get itself done. A little later the beginnings of an assembly hall would be made by the campers themselves laying the foundation from timber on the ground, covering it with a rough floor, and roofing it with one or two old sails. Next year we can complete it.

If we are willing, abandoning all pretention and style, to set forth in the good old-fashioned backwoods way to do for ourselves what needs to be done, working together in hearty good-fellowship, according to our means, for a common end, not being ashamed of the day of small things, not getting in debt, or trying to do what we cannot do, we can establish a permanent institution of great value to the farmers of this part of the State, and to the Granges, and have loads of fun in doing it; the operation will also be attended with some profit, since the work and outlay which I have indicated, with the occupation of the ground for a year, will give a decided value to the property, which the Grange will own in trust for the farmers of the State, and say what you will, it is "proppetty" which

makes possible success in public as well as private affairs. If, however, the evolution of the American farmer has eliminated those qualities of independence, self-help, frugality, and respect for the day of small things, which once made him the type of what was solid and substantial in the American race, so that he no longer cares to do things in old-fashioned ways, but must needs buy and hire altogether, then we may as well drop the matter. The money to do the necessary work cannot be raised among us.

If space permitted, I would give in detail an estimate of the necessary expense of visiting the camp; should expressed interest seem to warrant it, I will do so at some future time. For the present it is sufficient to say, that the expense will be about the same as camping elsewhere, with a slight addition for the special privileges enjoyed. Board and rooms can be had in the vicinity at from \$7 to \$10 per week, according to accommodations desired; or families can bring their tents or hire them here, and board wholly or partly.

I think there should be a pledge of forty or fifty families to occupy the camp to justify the effort of opening it; with that number actually pledged there would be a certainty of many others, and growth could be relied on.

Now what we need to know is not who approves the plan, but who will camp on the grounds. People often approve in the abstract what they never do in the concrete—usually because they have not the money. Now, with the promise to do all in our power to make expense nominal, who will attend the camp, and what time will be most convenient? All such should write to the *RURAL*, or to San Jose Grange, or to Highland Grange, or to me.

EDWARD F. ADAMS.

Wrights, Cal., April 27, 1895.  
P. S.—I see the papers make me Master of Highland Grange. I am not. My official position in the Order is Gatekeeper.

#### Report from Brother Shoemaker.

Under date of Marysville, 28th inst., Bro. E. C. Shoemaker writes to the *RURAL* of his visit to South Sutter Grange in his character of official Inspector. Bro. Ohleyer, who has been his companion in almost all his visitations, was forced by illness to forego this trip, and Bro. Shoemaker very kindly fulfills his office as correspondent of the *RURAL*. The trip he describes as charming, although not free from inconvenience caused by the recent flooding of the roads. The Inspector passed the fine ranch of Bro. Dan Ostroim, also that of the late Senator Chandler, where he counted ten gangs of plows at work on the fallow lands, and numerous other signs of rural industry which led to the reflection that, in spite of all that one hears to the contrary, farming is by no means played out in California. He found the Grangers waiting to receive him in holiday trim, with their hall beautifully decorated and a harvest feast in waiting. Everybody was in the best of humor, especially the Master (Bro. Henry J. Grunewalt), who only the week before had been married to Sister May Donaldson, who is officially related to the Grange as Overseer. Continuing, Mr. Shoemaker writes:

All officers of this Grange were present. The work was well rendered. This Grange owns its hall; also the cemetery, in which they sell lots to all persons. The young people take great interest in literary work. Sufficient older ones like Mrs. Donaldson, Jones, Good, Sankey and others make the Grange a real farmers' home.

As this meeting finished the Inspector's work in the Third District, he gave a short account of his work. The Grange throughout the north is in good condition. There is manifested a greater interest to advance our cause than for many years. The work has been well rendered in every Grange. Much praise for this efficient work can be credited to the ever faithful and able State Deputy, Bro. B. F. Frisbie, who for several years has visited each Grange one or more times each year since he has been a Deputy, from the fertile Sacramento valley to Magnolia's romantic hills, then to the Sierras. Here lives Juvenile Grange No. 1; then across the valley to Millville plains, beneath Mt. Shasta, where we met with a royal reception. I cannot give too much praise to the many hundred of noble brothers and sisters whom I had the pleasure to meet on this 1100 miles journey among the Grangers of the north, in rain, in snow and clear weather. I was well pleased with the result of my work, and now I hope that all will take hold and work together for our noble cause and make it the pride of the American farmer. Also, let us ever be ready to encounter and defeat error by day and by night, in light or in darkness—in thick darkness if it comes—until danger's troubled night is o'er and the Grange star of peace and victory shall return.

E. C. SHOEMAKER.

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The things we forget!

What untold mischief these do cause us all!

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You decide upon a machine which, you remember, showed up very favorably in a draft test—but you forget what sort of a "test" it was.

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But you forget that the

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was on hand ready to meet any and all competition in the World's Fair field tests—tests in which all American machines were urged to take part.

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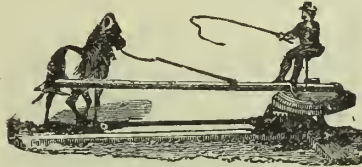
You forget that the McCormick is higher priced only because of its higher quality.

Write the McCormick Harvesting Machine Co., Chicago, or call on their local agent.

**WHAT WE SAY WE DO WE DO DO**

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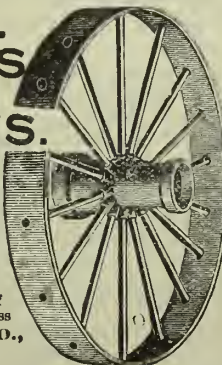
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## S. F. MARKET REPORT.

## Market Review.

SAN FRANCISCO, May 1, 1895.

**FLOUR**—Market steady at the recent advance in price. We quote: Net cash prices for Family Extras, \$3 40@3 50 ¢ hhl; Bakers' Extras, \$3 40@3 50; Superfine, \$2 35@2 50 ¢ hhl.

**WHEAT**—The very remarkable advances in the Chicago and London markets, noted on another page, has not affected prices here owing to local causes which are well understood, and trading continues inactive. Quotable at 88½¢ cbl. for No. 1 shipping, and 90¢ for choice. Milling Wheat, 92½¢ @97½¢ cbl.

At Chicago to-day prices for December Wheat advanced from 63½¢ ¢ bushel to 65¢, receded to 64¢, and again advanced to 65¢, closing strong at the last-named figure. Since April 8th the aggregate has been approximately ten cents. It is the general supposition that Armour is engineering a "corner," but this may or may not be true.

A remarkable feature of this movement is that the fluctuations in Chicago are persistently reflected in the London prices, demonstrating the dependence of that market upon the American supply.

Charters at San Francisco have advanced sufficiently to neutralize the effect of the Chicago movement.

**BARLEY**—The conditions of the market have undergone no change of consequence for a week. There have been attempts to give the situation more tone and strength, but no permanent improvement was established. The crop outlook is too promising just now for prices to exhibit any buoyancy. Of course, something may occur between now and harvesting to give different aspect to matters. Meanwhile, movement is likely to be slow, with values presenting easy tendency. We quote: Feed, fair to good, 61½¢@62½¢; choice, 65¢@66½¢; Brewing, 80¢@87½¢ ¢ cbl.

**OATS**—Buyers are moving slowly and there is no inclination to purchase ahead of immediate requirements. Receipts so far this week foot up over 80,000 cbls, coming mostly from the north. Offerings consist largely of medium and low grades, while the demand is mainly for the better grades, even at higher figures. We quote as follows: Milling, \$1 07½¢@1 17½¢; Surprise, \$1 07½¢@1 17½¢; fancy feed, \$1 02½¢@1 07½¢; good to choice, 95¢@97½¢; fair to good, 90¢@95¢; poor to fair, 85¢@87½¢; Black, nominal; Gray, 95¢@1 02½¢ ¢ cbl.

**CORN**—The demand is anything but brisk, while prices are more or less irregular. There is considerable inferior Corn on the market, which is hard to work off, though buyers can get it at about their own figures. We quote: Large Yellow, \$1 @1 17½¢; small Yellow, \$1 12½¢@1 20 ¢ cbl; White, nominal.

**RYE**—Quotable at 83½¢@85¢ ¢ cbl.

**BUCKWHEAT**—Quotable at 90¢@1 10 ¢ cbl.

**OILCAKE MEAL**—Quotable at \$25 ¢ ton from the mill.

**COTTONSEED OILCAKE**—Quotable at \$24 ¢ ton.

**MIDDLINGS**—Quotable at \$18@19 ¢ ton.

**BRAN**—Quotable at \$13 50@14 50 ¢ ton.

**GROUND BARLEY**—Quotable at \$15 50@16 ¢ ton.

**HAY**—Receipts have been quite small for a few days, thus preventing any further decline in prices. Wheat, \$7@11; Wheat and Oat, \$7@11; Oat, \$7@10 50; Alfalfa, \$6 50@8 50; Barley, \$7@8 50; Clover, \$7@8; Compressed, \$8@10 50; Stock, \$6@7 ¢ ton.

**STRAW**—Quotable at 50¢@70¢ ¢ bale.

**FEED**—Manhattan Horse Food (Red Ball Brand) in 100-lb. cabinets, \$8; Manhattan Egg Food, 100-lb. bags, \$11 50.

**BEANS**—Transactions are few and small in quantity. Small Whites and Peas are steady, while Pinks show weakness. Quotations for Red Kidneys are somewhat nominal at a wide range. We quote as follows: Bayos, \$1 50@1 80; Butter, \$2@2 25 for small and \$2 25@2 50 for large; Pink, \$1 40@1 60; Red, \$1 40@1 70; Lima, \$4 50@4 70; Pea, \$2 65@2 85; Small White, \$2 65@2 85; Large White, \$2 60@2 80; Blackeye, \$3@3 50; Red Kidney, \$1 90@3; Horse, \$1 60@1 70 ¢ cbl.

**SEEDS**—The Mustard crop is said to be promising for a large yield this season. The demand just now is light for all kinds. Mustard, Brown, \$1 25@1 75; Yellow, \$1 75@2; Trieste, \$1 50@1 75; Canary, 3¢@4¢; Hemp, 3¢@3½¢; Rape, 1½¢@2¼¢; Timothy, 5½¢@6½¢; Alfalfa, 7½¢@7¾¢ ¢ lb; Flax, \$2@2 50 ¢ cbl.

**POTATOES**—New Potatoes of large size and sound quality are in demand at top rates. Small ones go to peddlers at almost any price. Old descriptions are abundant. We quote as follows: New, ½¢@1½¢ ¢ lb; Early Rose, 30¢@40¢; Burbanks, 30¢@50¢; Oregon Burbanks, 40¢@75¢ ¢ cbl.

**ONIONS**—Choice product is scarce and firm. Quotable at 65¢@1 35 ¢ cbl, as to quality.

**VARIOUS**—We quote: Cucumbers, 35¢@65¢ ¢ doz; Asparagus, 50¢@1 25 ¢ box for the general run and \$1 50@1 75 for choice; Rhubarb, 25¢@50¢ ¢ box; String Beans, 6¢@15¢ ¢ lb; Green Peas, \$1@1 50 ¢ sack for common and 2¢@2¼¢ ¢ lb for sweet; Turnips, 50¢ ¢ cbl; Beets, 60¢@75¢ ¢ sack; Carrots, 30¢@50¢; Cabbage, 80¢@90¢ ¢ cbl; Garlic, 10¢@12¢ ¢ lb; Cauliflower, 80¢@90¢ ¢ cbl; Dried Peppers, 1¢@12¢ ¢ lb; Dried Okra, 15¢ ¢ lb.

**FRESH FRUIT**—Apples—Quotable at 50¢@1 75 for common to choice, with \$2@2 50 for fancy.

Berries—Gooseberries, 50¢ ¢ 5-lb. drawer; Strawberries, Sharpless, \$3@5 ¢ chest; Longworth, \$5@8.

Cherries—Quotable at 60¢@2 ¢ box for red and black, and 50¢@75¢ for white.

**CITRUS FRUIT**—Oranges are plentiful and cheap. We quote: California Navels, \$1 25@2 50; Seedlings, 75¢@1 25 ¢ box; Mexican Limes, \$3 25@3 50 ¢ box; Lemons, \$3@4; California Lemons, 75¢@1 50 for common and \$1 75@2 for good to choice.

**DRIED FRUIT**—Offerings of desirable qualities are unlimited, while movement is slow.

Prunes are reported as dropping in about all growing sections, though the amount of damage in this line cannot be learned until later in the season.

Following are the prices furnished by the Fruit Exchange. The figures presented represent carload lots, smaller parcels occasionally selling at slightly lower rates:

Apricots—Fancy Moorpark, 8¢; choice, 10¢, 7½¢; fancy, 7¢; choice, 6¢; standard, 5½¢; prime, 5¢.

Apples—Evaporated, 5½¢@6¢; sun-dried, 4¢@5¢.

Peaches—Fancy, 7¢; choice, 6½¢; standard, 5½¢; prime, 5¢; peeled, in boxes, 12¢@13¢.

Pears—Fancy, halves, 5½¢; quarters, 4½¢; choice, 4½¢; standard, 3½¢; prime, 3¢.

Plums—Pitted, 4¢@5¢; unpitted, 1½¢@2¢.

Prunes—Four sizes, 4½¢@4¾¢.

Notarines—Fancy, 7¢; choice, 6½¢; standard, 6¢; prime, 5½¢.

Figs—White, choice, 4¢@5¢; black, choice, 2½¢@3¢. Dried Grapes—1½¢ ¢ lb.

Raisins—in sacks (50-lb. boxes selling at ½¢ ¢ lb. higher): 4-crown, loose, 4¢; 3-crown, 2½¢; 2-

crown, 2¢; seedless Sultanas, 3¢; seedless Muscates, 3¢ ¢ lb; 3-crown London Layers, \$1 40 ¢ box in 20-lb. boxes; clusters, \$2; Dehesa clusters, \$2 50; Imperial clusters, \$3; 4-crown, loose, \$1; 4-crown, loose, faced, \$1 15 ¢ box.

**NUTS**—Chestnuts, 3¢@5¢; Walnuts, 6¢@7¢ for hard shell, 7¢@9½¢ for soft shell and 7¢@9½¢ for paper shell; California Almonds, 5¢@6¢ for soft shell, 2¢@2½¢ for hard shell and — for paper shell; Peanuts, 4¢@6¢; Hickory Nuts, 5¢@6¢; Filberts, 8¢@9¢; Pecans, 6¢ for rough and 8¢ for polished; Brazil Nuts, 7¢@7½¢ ¢ lb; Cocoanuts, \$4 50@5 50 ¢ 100.

**HONEY**—Comb, 9¢@11¢; water white, extracted, 6½¢@7¢; tight amber, extracted, 5½¢@6¢; dark amber, 5¢@5½¢ ¢ lb.

**BEESWAX**—Consignments of new crop are expected soon. Quotable at 26¢@28¢ ¢ lb.

**BUTTER**—Supplies are still of liberal proportions and prices yet shape against dealers. Dairy descriptions are very weak.

Creamery—Fancy, 12½¢@13¢; seconds, 11¢@12¢ ¢ lb.

Dairy—Fancy, 10¢@11¢; fair to choice, 8¢@9¢; store lots, 6¢@7¢.

**CHEESE**—Quotations are weak under accumulation of stocks. We quote: Choice to fancy, 6¢@7¢; fair to good, 4½¢@5½¢; Eastern, ordinary to fine, 10¢@14¢ ¢ lb.

**EGGS**—Ranch parcels are somewhat firmly held and selected stock occasionally brings a slight advance on quoted rates. Quotable at 10¢@11¢ ¢ dozen for store and 12¢@13¢ for ranch.

**POULTRY**—The market is in fairly good shape for sellers. A carload of Eastern is expected on Thursday. Live Turkeys—Gobblers, 11¢@12¢; Hens, 13¢@14¢ ¢ lb; Roosters, \$5@5 50 for old, and \$7@10 for young; Broilers, \$3@4 50 for small and \$6@7 for large; Fryers, \$8@7; Hens, \$4 50@6; Ducks, \$4@5 50 for old and \$7@8 50 for young; Geese, \$1 25@1 50 ¢ pair; Goslings, \$2@2 50; Pigeons, \$1 50@2 25 ¢ dozen.

**WOOL**—Quotations are steady for Wools of choice grades. Offerings that are burry or seedy receive scarcely any attention, in spite of low asking prices. The market for faulty stock seems likely to be dragging and unsatisfactory to sellers.

We quote spring:

Year's fleece, San Joaquin, ¢ lb..... 4@6½¢

6 to 8 months do..... 4@8¢

6 to 8 months Calaveras and foothill, free..... 7@9¢

Do, defective..... 4@6¢

We quote fall:

Mountain, free..... 4½@6¢

Plains, defective..... 3@4½¢

We quote Nevada spring:

Light and choice..... 8½@10¢

Heavy..... 6@7¢

We quote Oregon spring:

Eastern, choice..... 8@10¢

Do, poor..... 6@7¢

Valley, choice..... 9@11¢

Do, low grade..... 8@10¢

**HOPS**—Business is not of brisk character, and prices are somewhat nominal at a range of 5¢@7½¢ ¢ lb. The situation is described by Thomas' Produce Report as follows: "There has been some activity during the week for the 5-cent quality of goods, for both domestic and foreign account. The remaining stock of 93's has also been bought and shipped away. Notwithstanding the prospect of low prices for the coming crop, farmers show no inclination to abandon the culture of Hops. Some contracts are being made, by those who need money for harvesting purposes, at 9¢@10¢ ¢ lb."



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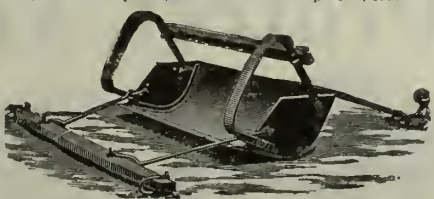
If so, we furnish Farm Hands, Teamsters, Men and Wives, etc., promptly. No charges to employers. Send in your orders to

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This Scraper is all steel—the only one manufactured in the State.

Price, all steel, four-horse, \$40; steel, two-horse, \$31. Address all orders to

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**J. P. ASHLEY**, Linden, San Joaquin Co., Cal. Breeds Poland-China, Essex and Yorkshire Swins.

**TYLER BEACH**, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.

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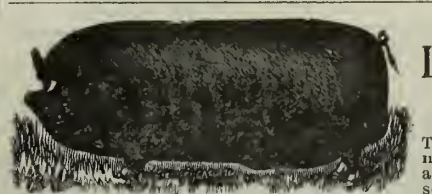
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## Orange Culture in California.

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"Orange Culture in California" was written by Thomas A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent, postpaid, at the reduced price of 75 cents per copy, in cloth binding. Address THE PACIFIC RURAL PRESS, 220 Market Street, San Francisco, Cal.

## POULTRY AND STOCK BOOK.

NILES' manual and reference book on subjects connected with successful Poultry and Stock Raising on the Pacific Coast. Over 100 pages, profusely illustrated with handsome, lifelike illustrations of the different varieties of Poultry and Livestock. Price, postpaid, 50 cents. Address PACIFIC RURAL PRESS Office, San Francisco, Cal.

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Recommended by Goldsmith, Marvin, Gamble,

Wells, Fargo &amp; Co., etc.,

etc. It keeps Horses and Cattle healthy. For milch

cows; it increases and enriches their milk.

Manhattan Food Co., San Mateo, Cal.

Ask your dealer for it.



### Making Climate as Desired.

Prof. F. B. Crocker, of Columbia College, is an electrical scientist whose utterances are entitled to some attention. Regarding the probability or possibility of controlling the weather by means of electricity, to "make rain," or cause fine weather, the Prof. says:

"It is difficult for the most conservative man to set any bounds to the possibilities of what electricity will one day accomplish. Of course, there is one great fallacy in the popular mind, and that is that we know very little about electricity. On the contrary, we know a great deal. Electricity is to-day one of the most exact of all the sciences. On the other hand, it is perfectly fair to say that we have hardly begun to put this agency to the various uses which will be made of it in the future. In a word, while we know a great deal about it, we have only just begun to perfect mechanical devices for applying and utilizing it.

"I do not know that it would be at all impossible to make rain by electricity. The discoveries of Lord Rayleigh and Prof. Oliver Lodge are very well known to science, and have led to many interesting experiments. For example, a current of electricity applied to a broken or interrupted jet of water will make the stream perfectly smooth and continuous. One great difficulty in making rain by this means would be that of securing an effective discharge of the fluid. However, it might be feasible to send up a balloon from which could be suspended a large circular ring, with a large number of sharp points sticking outward, and connected by a fine wire with a high-tension dynamo or influence machine below. Whether this would secure the desired end, I am not sure, as air, you know, is a very bad conductor. It is a thing that would have to be exhaustively tested by actual experience. Perhaps the greatest difficulty to overcome would be that of effecting the discharges of electricity in the proper places and at the desired altitudes.

"I think it is entirely probable that within another decade we shall have solved practically the question of aerial navigation. Not that this problem is so very easy; but it presents no more difficulties than hundreds of other similar mechanical problems have, and there is no more reason to suppose that we shall not build a successful air ship than there was reason to suppose a hundred years ago that steam could not be applied to the propulsion of a train of cars along a smooth track or of a ship across the ocean. And, of course, if we get an air ship that can be easily operated, and will carry a considerable weight, then it will be very easy to load a ship with storage batteries containing a big electrical supply, sail up into the clouds, and discharge the electricity wherever we want it. In a word, if it is found that we can make rain by an electrical discharge, and we want to do it, it will not be very long before we shall find ways and means of doing it.

"Of course, it would still remain to be seen whether there is actually enough moisture in the arid areas of the great West to precipitate a considerable rainfall.

"I do not know that I clearly understand the suggestion as to utilizing the heat of the tropics to modify the temperature of colder climes. The sug-

gestion may be simply to utilize the heat of the sun's rays by means of a solar engine for the creation of electricity. This could be transmitted long distances. You know in the tropics, where the sun's rays are intense, the solar energy develops a force of about one horse power to each square yard of the surface exposed. Inasmuch as the sun's action is very nearly continuous in the day time, and but a little interrupted by clouds, this force is fairly reliable.

"But it seems to me there may be a much simpler device than this for modifying the climate. The simplest device would be to pump hot air from the tropical zone and cold air from the region of the Arctic circle. It would not be difficult, nor would it be very expensive, to construct a steel tube system of sufficient diameter to somewhat modify the climate of the Eastern seaboard.

"For example, a thin steel tube, say four or five feet in diameter, would convey an enormous quantity of air. One has really no idea of what this quantity would be until one stops to figure it out.

"The idea is identical with the pipeline systems now in use. Oil is piped long distances from the oil wells of Pennsylvania, and, similarly, natural gas is piped long distances. Now, it would be just as easy and just as feasible to pipe air as oil or gas.

"The distance, too, is not so very great. I have been surprised to find how short a line would serve for this purpose. If it extended from within the tropical zone to within the Arctic zone, it would more than meet the requirements and still extend over only an eighth of a circle. It would be only about three thousand miles long. I do not think that it would require a pipe of more than four or five feet in diameter, and the pipe could be built of thin steel and need not be expensive. Such a line would not be nearly so costly to build and equip as a railroad line, nor does it present any material difficulties. It would be the simplest of mechanical problems, and the 'right of way' would not be expensive.

"For motive power some out-of-the-way waterfall could be utilized, so that the expense of operation need not be very great.

"I know all such suggestions as these are generally looked upon as coming from a wild-eyed lunatic; but there is really nothing half so daring in this suggestion as was the idea of laying a cable under the Atlantic. The difficulties to be overcome were greater than any difficulties with which this enterprise would meet. We go to a great deal of expense to secure pure water. I don't see why it would not be just as feasible to provide means for fresh air and at the same time modify the rigors of our climate. Of course, the original heat or cold might be lost in transmission, but the air would always produce heat where it is compressed and cold where it expanded."

There are thinkers and dreamers in every branch of science and progress. Edison, Tesla and Bell show what thinkers can do. The gentleman interviewed above seems to belong to the class of dreamers.

NO SAFER OR MORE EFFICACIOUS REMEDY can be had for Coughs, or any trouble of the throat, than "Brown's Bronchial Troches."

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It has no equal as a light reflector for light-shafts and court-yards of large buildings. It is supplied in a thick paste, to be diluted with cold water. It is made in white and several colors.

INSIDE INDURINE Is designed especially for factories, stables, and general indoor work, as a substitute for whitewash, kalsomine or oil paint.

It will not rub or scale, soften or darken with age, and works well over old whitewash. A dry powder to be mixed with cold water.

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Mission, 3 years. 5 to 6 feet  
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Is hard to beat. Can be planted till June. Yields about 2,000 lbs. corn and 12 tons excellent fodder per acre on dry land. Can be harvested with combined harvester. Send \$1 per acre for seed desired. Address: SACRAMENTO RIVER NURSERY CO., WALNUT GROVE, CALIF.

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## The Dead of the Sea.

An inquisitive Frenchman has thought it worth while to ask what becomes of the bodies, after death, of the numberless fish and other living creatures that fill the sea. Of course they all die, sooner or later, and yet it is an occurrence so rare as to be practically unknown for anybody who lives beside or on the ocean to come across the "remains" of even a single victim of the fate that awaits all things mortal. In the profounder depths putrefaction cannot take place, so if a dead fish once reached those calm, chill abysses he would be preserved until the end of time. Probably, however, no such peaceful repose awaits more than an infinitesimally small proportion of the finny folk, and no great accumulation of lifeless bodies exists at the bottom of the sea. The living eat the dead before they can make the long, slow journey downward. As a matter of fact, extremely few fish, and perhaps none, ever meet what is known as a "natural death." Almost always they are slain and devoured, and so put definitely out of the way.

## New State Society Directors.

The terms of L. U. Shippee of Stockton, W. L. Hardison of Ventura, and Chris Green of Sacramento, directors of the State Agricultural Society, having expired, Gov. Budd on Tuesday last appointed the following gentlemen in their stead: John Budd of Stockton, William Land of Sacramento, and John Mackay of Rancho del Paso. The first named is a brother of the Governor. Mr. Land is the well-known proprietor of the Western Hotel in the capital city, and Mr. Mackay is known to every horseman in the United States as the superintendent of the Haggin breeding farm.

## List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING APRIL 16, 1895.

537,559—WAVE MOTOR—W. N. Best, Redondo, Cal.  
537,448—SAVINGS BANK—J. H. Greefrens, S. F.  
537,449—SAVINGS BANK—J. H. Greefrens, S. F.  
537,532—TRUNK—W. C. T. Hansen, Seattle Wash.  
537,451—CONDENSER—W. P. Hawley, Oregon City, Or.  
537,704—ROASTER—N. H. McAulish, Sutter City, Cal.  
537,556—GOLD-SAVING APPARATUS—A. G. Tingman, Indio, Cal.

NOTE: Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail for telegraphic order). American and foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

## THE RAISIN INDUSTRY.

A Practical Treatise on Raisin Grapes, Their History, Culture and Curing.

By GUSTAV EISEN.

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All kinds of tools. Fortune for the driller by using our Adamantine process; can take a core. Perfected Economical Artesian Pumping Rig to work by Steam, Air, etc. Let us help you. **THE AMERICAN WELL WORKS,** Aurora, Ill.; Chicago, Ill.; Dallas, Tex.

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OF CALIFORNIA.

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INCORPORATED.....APRIL 1874



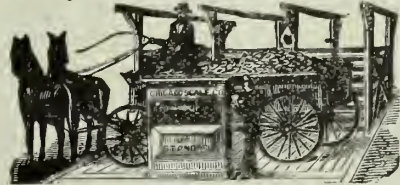
Capital Paid Up.....\$1,000,000  
Reserve Fund and Undivided Profits, 130,000  
Dividends Paid to Stockholders.... 832,000

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I. C. STEELE.....Vice-President.  
ALBERT MONTEPELLIER.....Cashier and Manager.  
FRANK McMULLEN.....Secretary.  
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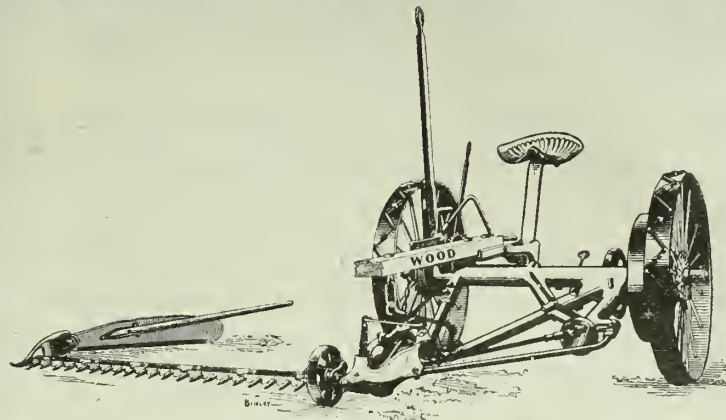
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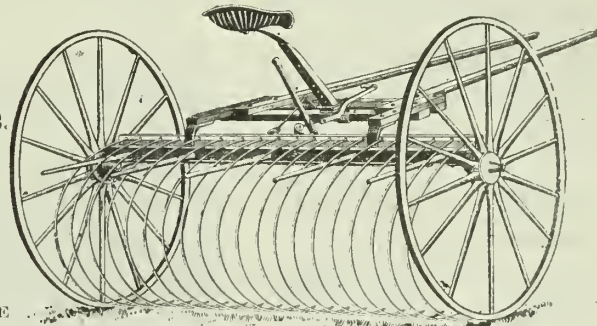
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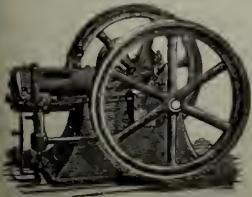
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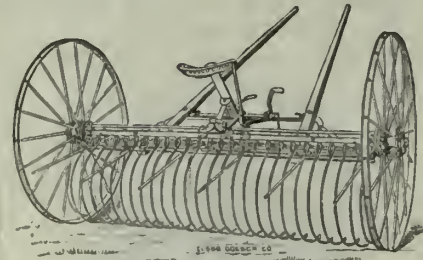
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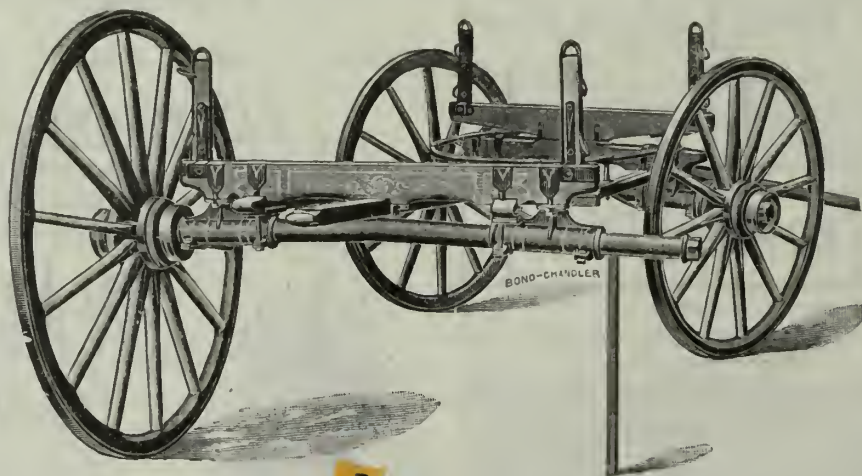
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## AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 19.

SAN FRANCISCO, SATURDAY, MAY 11, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

### Importing Potatoes.

Perhaps few people know that during the year ending June 30, 1894, the United States imported over three million bushels of potatoes and exported less than one million bushels, or more than two millions excess of imports over exports. Perhaps few know that the year before last the case was much worse, as the excess of imports was nearly three and a half million bushels; four years ago it was over five millions, and eight years ago over eight millions. In fact, only once in the last ten years have we sent out more potatoes than we received, and that year the balance was only one-third of one million bushels on the side of exports. And where do these imported potatoes come from? Are they early potatoes from the West Indies and other places near the equator? Not at all; our chief imports are from Scotland, the Netherlands and Canada—all northern countries, where potatoes are late. The situation seems to be simply that we pay foreign growers for all these potatoes because we haven't energy or gumption to grow enough to supply our own tables.

It is altogether likely that the countries from which we bring potatoes practice higher culture than we do. With us truly the potato is allowed to produce itself too largely. To plow under or "drop in the hill" any kind of seed potatoes and then take whatever unfertilized soil will give us is not advanced potato growing, and so long as that policy largely rules the United States will keep on buying potatoes. Of course we know better, and we have a few potato growers at the East and elsewhere who are keen for the best varieties and treat them well, but as a whole the potato crop of the United States is very coarsely handled.

Of course, our potato growers have to compete with cheap labor abroad, but that ought not to count against our machinery and newer soils, which need little manure as compared with the European fields which have to be constantly reinforced with fertilizers. There may be some reason why we should be still paying out money for some food supplies produced abroad, but that we should go to Europe for potatoes is an insult to the genius of America. It is humiliating that we should be found so lacking in wisdom and enterprise that we do not grow enough for our own use of a native American plant. Instead of ransacking the earth for new plants and fancy agricultural products, we had better first pull off our coats and grow enough spuds.

ALL the larger commission houses in St. Louis have combined in the establishment of a cold-storage plant for the preservation of eggs. The plant will be big enough to hold about 50,000 cases at one time.

### On the Mendocino Coast.

The upper coast region of California, although it has no snug harbors, is a region of brisk commerce, and rich in the picturesque as well. The upper coast cities and towns are places of thrift and wealth, although the cry of the main-line locomotive has never sounded in their vicinity. They move by steam in ships and saw-mills and local railways, but

stream for boating and for other pastimes of the outing season.

### Sheep and Wool.

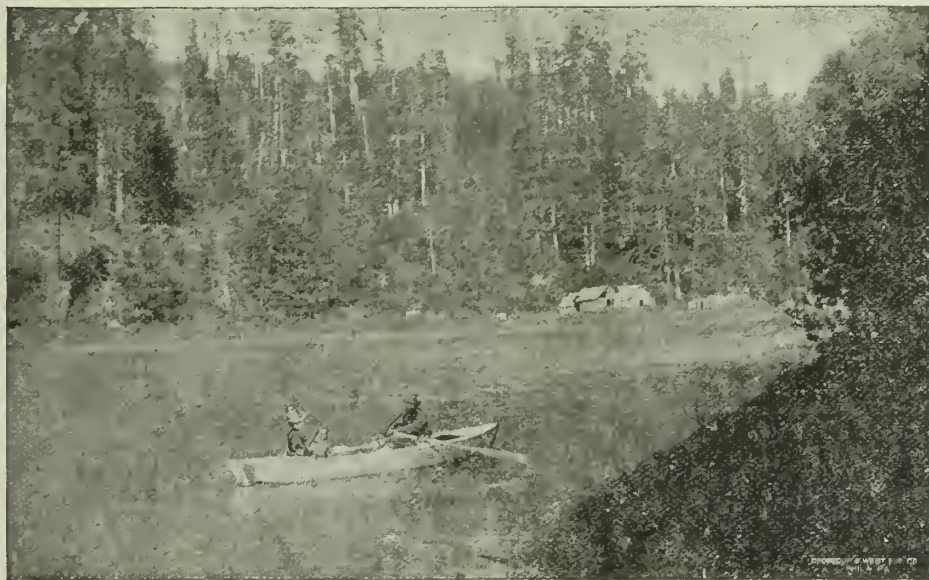
There seems to be a little better feeling this spring among the flock owners. There is some tendency toward improvement in values, and confidence is being regained chiefly on the ground that it is time the long lane had a turning. Most conversation among sheep men we have met in the interior has this as the chief basis of hopefulness. It is perhaps more satisfactory to the average mind than any learned discussion of fundamental principles would prove. It is probable that the sheep tide has now gone down to low-water market, and any movement must be upward, but other than on a mutton basis there does not seem to be any ground at present for increase of sheep stock. In the Eastern markets the supplies of old wool have become much reduced. Boston prices this week are telegraphed as follows: Montana fine medium and fine, 9@11c; scoured, 30@32c; Wyoming, Utah and California fine medium and fine, 9@11c; scoured, 30@31c; Australian combing, superfine scoured, 41@42c; Australian combing average, 35@37c.

In this city there were 22,411 bales and 742 sacks of California wool received during April. This is counted quite a free receipt in view of flock reductions. In the new adjustment of prices, following recent large sales, the market has been given a more favorable appearance. Just at present receipts of sheep have fallen off and better prices are quotable. It will, of course, only take a little better feeling to induce interior flock-owners to hold back sheep in view of the large amount of pasturage available this year. Little is heard now of improved sheep although the recent advance in popularity of the French Merino is still influencing operations to some extent. The disposition is to grow larger sheep and look less at the fineness of the wool than formerly. This is the natural outcome of the situation which makes the mutton chance a

greater factor than it used to be on the Pacific coast.

In Germany, during trotting races, whenever the gait of a horse in a race does not suit the judges, as being far from square, up goes his number on a post in sight of all on the track, and that means: "My boy, you can stop; you are out of the race; you may bring your trotter back to the barn."

THE trustees of the Mechanics' Institute have decided to award beautifully engraved certificates of merit and superiority instead of medals to those who secure premiums at their exhibits.



SUMMER SCENE ON BIG RIVER, NEAR MENDOCINO CITY.



MENDOCINO CITY, ON THE UPPER COAST OF CALIFORNIA.

they reach the world at large by the water route or stage route only. It will not much longer be so, probably, and their prosperity thus far under the handicap which has sat upon them fairly indicates what they will be when the good time comes.

But we would at this time merely call attention to the picturesqueness of the Mendocino portion of the coast as inviting those who are planning for an outing in a new region. One picture shows Mendocino City and a little corner of the adjacent sea coast. The other scene shows the wooded shades of Big River, which rises inland in the large county of Mendocino and flows westerly to the ocean. It is a fine



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ALFRED HOLMAN, Editor.  
E. J. WICKSON, Special Contributor.

San Francisco, May 11, 1895.

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## The Week.

### Fruit-Growers' Convention.

The State Horticultural Society has accepted the invitation of the Sutter County Horticultural Society to meet at the Courthouse in Yuba City on Friday, May 31st, at 10 o'clock A. M., for a grand rally of fruit-growers for the discussion of matters of the most pressing importance to the fruit industry. It is expected that other local horticultural societies will join with the Sutter County Society in the welcome to the State Society, and that there will be a general attendance of fruit-growers from all parts; for all are cordially invited.

At the last meeting of the State Society invitations were extended to the following gentlemen and ladies to prepare papers or addresses for the Yuba City meeting on the subjects mentioned

Mr. Ralph Hersey, of Santa Clara, on "Curing and Preparing Fruit for Commerce."  
Mr. B. F. Walton, of Yuba City, on "Grading and Packing Fruit to Meet the Wants of the Trade."  
Col. H. Weinstock, of Sacramento, on "Improved Methods of Marketing Deciduous Fruits."  
Mr. A. T. Hatch, of Suisun, on "The Outlook for California Almonds."  
Mr. Frank Buck, of Vacaville on "Fruits for Shipping Which Pay Best and How to Handle Them."  
Mr. W. P. Hammon, of Biggs, on "Best Varieties of Fruit to Grow for Profit."  
Miss Anna McConnell, of Sacramento county, on "Chrysanthemum Growing."

Other ladies and gentlemen will be invited to places on the programme by the Sutter County Society, and there will be a most free and frank discussion invited of all matters brought before the convention. Mr. B. M. Lelong, President of the State Society, will deliver the opening address and respond to the welcome of the Sutter County Society. It is just the time of the season when growers should confer upon pending questions, and it is hoped the Yuba City meeting may prove notable in the history of the State Society.

### The Railroad Will Help.

In view of the answer made some weeks ago by Vice-President Stubbs to the Fruit Growers' Committee, it is somewhat surprising to find that the railroad company is planning to make things a little easier for fruit shippers. It is announced that Mr. Smurr, the General Freight Agent of the Southern Pacific, is preparing a new freight tariff to apply on shipments of deciduous fruits in ventilator cars as a means of securing for shipment in ventilators much fruit which has hitherto gone forward under refrigeration. The new tariff will be announced in a few days. Mr. Smurr says that reductions will be confined to the rates on shipments between branch-line points and main-line intermediate points. In other words, the local rates charged for the handling of fruit on all the company's trunk lines in California will be reduced and the existing through rates will not be disturbed. The Vaca valley branch affords an example for the illustration of the company's methods.

The fruit-grower in Vacaville who ships a carload of fruit to Chicago is required to pay, in addition to the established through rate, a local rate for the shipment of his fruit from Vacaville to the junction on the main line. It might be explained that the through rates apply only from points on the main line in California to the Eastern terminal. The Vacaville fruit-grower will now be afforded the benefit of a forty per cent reduction in the local rate. Mr. Smurr says the reductions on all the branch lines will average forty per cent. The saving by this reduction will not be very great, but it is in the right direction. Much greater practical advantage is to be looked for from the expedition of the ventilated car service. It is understood that the railroad is going to try to enforce a five-day service for ventilated cars, and if this can be done, it will save to growers a prodigious sum now paid out for the use of refrigerator cars and for ice to keep them cool.

### More Jam.

And now we have a Daniel come to judgment on the jam proposition, and this is the decision of the court of last appeal, sealed, signed and delivered:

The American manufacturer, and the American manufacturer only, is to blame for the existing condition of things. The reason why so many imported goods find a market here is because the American packer is not content with a small profit on his goods. He is a pig-headed individual who cannot and will not be taught anything. He is not conversant with the English method of packing jams, jellies, marmalade, etc. You cannot teach him anything, for he simply will not be taught by a foreigner. Furthermore, the American manufacturer grudges the expense of fitting up a factory on the English plan. In America they pack preserves in the most expensive way—that is, they keep them whole. While, by this method, the goods have a nice appearance, they have no flavor. The keeping of the fruit whole is a lengthy and expensive process.

Now, in England they "jam" all the fruit up, which keeps the flavor of the fruit intact for a longer time till it is wanted for bottling. Fruit can be preserved for a three months' keeping or for a year. It all depends upon the method of storing. It has to be stored at a certain temperature, and if that temperature is changed fermentation sets in and the fruit is spoiled.

While it may be true that certain fruits grown in California do not equal in flavor the same ones grown in the harder English climate, as an expert on the subject I maintain that if a factory were run upon the English plan in California, the foreign product would soon have to go out of the market. A factory on such lines would cost about \$45,000, and this sum would also furnish a running capital.

The orange, lemon and citron candied peel industry could also be developed to advantage in California. Why, it is impossible in California to purchase such a thing as a Seville bitter orange. In England these are used in the manufacture of marmalade, but in California the ordinary sweet orange is employed.

The foregoing is the declaration of a fine old English gentleman who was for seven years foreman for Crosse & Blackwell. That the American manufacturer is a pig-headed individual will be rather news to the world; that the California packers are afraid to spend \$45,000 on a packing outfit and its running capital is queer comment in view of what the existing plants have cost; and that our packed product is not sold close to cost will be a revelation to those who have packed and sold most of it. But the most ridiculous statement of all is that which claims that to preserve the flavor of fruit you have to "jam it up." There is no closer approach in the world to the retention of fresh fruit flavor than in the best processed whole fruit. Jam flavor is not fresh fruit flavor. It is a fruity flavor, a delicious flavor and all that, but any man who claims that the best jam has a fresh-fruit flavor is—well, we'll call him an "American manufacturer." Any one who sets up our higher grades of canned fruits against jam raises a false issue. There is and can be no conflict between the two. We should produce both to the fullest extent that the market will accept. Jam is all right, and has uses which canned goods cannot reach either in cost or style. It is sure enough, however, that if our fruit-packing industry had proceeded on a jam basis we could not have sold one-thousandth part of the fruit which we have already disposed of. But we need the jam business, too, and the discussion now going on may show how it can be profitably undertaken.

### Floral Displays.

We are still in the midst of the fete and fiesta and flower show season. Never before have these delightful events occupied so large a part of the public mind. Following the great floral events at Los Angeles and Santa Barbara came a host of local efforts. Los Gatos, San Jose, Tulare, Santa Cruz and Chico have all held very successful and satisfactory displays. The affair of the State Floral Society at the Palace Hotel in this city last week was notably gratifying florally, socially and financially, and will do the society lots of good. This week Berkeley and Santa Rosa are *en fete*; the Santa Rosa affair being the most elaborate ever undertaken in this part of the State. Healdsburg will make a good second this year with her festivities which come next week. Evidently the goddess Flora is in it this year and we hope she will stay there.

THE Hanford Journal is informed that King's county "bids fair to have a very large crop of peaches, pears and nectarines. Prunes also will be a fair crop. Reports reach us that in some prune orchards the fruit is dropping off, while in other orchards the crop is very large.

## Plans for Reform of the Fruit Auction System.

A dispatch from New York, dated Tuesday of this week, quotes from the New York Journal of Commerce as follows:

There is great interest being shown in fruit circles in this city as to the manner in which California fruit is to be handled this year. Last year the fruit was received by different firms and was all sold at auction on its arrival on the Erie piers. It seems that last year's business was not entirely satisfactory to the California fruit growers, as the sales of California fruit would take place on two different piers simultaneously. In order to prevent this unsatisfactory condition, the California Fruit Union is now considering the advisability of making shipments to receivers on the condition of some reorganization in the auction methods of last year being made. The Union is expected to arrive at a decision on this matter this week, and in the meantime the uncertainty is a source of much annoyance to former receivers.

This is substantially true, though the name of the California Fruit Union has been substituted for that of the Weinstock Committee. This committee, which was appointed by the Fruit Growers' Convention at Sacramento last November, has undertaken to do away with the abuses which have associated themselves with the auction system, and we are assured by Mr. Weinstock that it is in a fair way of doing it. It has brought representatives of Porter Bros. and the Earl Fruit Co. into harmony in support of the projected reforms, and other and smaller agencies are expected to fall into line. It is proposed to have all auctions open to all comers and to have all sales in any one city—no matter who the consignees may be—conducted under the same roof and at appointed times. Another project which the Weinstock Committee has in hand is the organization of an agency at the California end of the route—probably at Sacramento—to route shipments of fresh fruits from day to day and do pretty much the same work that was done for several years by the California Fruit Union. The Weinstock Committee is to meet at Sacramento the latter part of this week, when it is expected that its plans will be inaugurated in a practical way.

All idea of employing the Perkins process, the carbonic acid gas process or any other process in anything more than an experimental way during the coming season has been given up. Dependence will be had entirely upon the auction system under the plans of reform above outlined. The railroad company makes no definite promises for faster service, but it has built several hundred new ventilated cars for this season's use, and we are told unofficially that an effort will be made to carry out a five-day schedule between Sacramento and Chicago. Under these assurances, there is very general hopefulness among shippers, and it is generally expected that a much larger share than usual of the season's shipments will go forward in ventilated cars.

## Eastern Fruit Prospects.

Judging by the current reports from the East they will have so much fruit this year that they can ship part of it to California. But how little Eastern reports are worth when given as early in the season as this, it is difficult to calculate. At a meeting of the Santa Clara Fruit Exchange, last Saturday, President Hersey read a crop-prospect article, dated April 27th, from an Illinois paper. It stated that there would be an enormous crop of fruit, when the fact of the matter was that many of the trees in that section were not yet in bloom at that time. And even where the bloom has apparently passed winter and early spring conditions, there are still many gauntlets for the fruit to run before it can be safely counted upon. Our readers should bear this in mind and not be borne down too much by those whose interest it may be to get fruit cheap. Still, it is interesting to see what is said of the Eastern crop, and we collate a number of reports from the New York Fruit Trade Journal of April 27th:

The peach buds along the shores of Lake Keuka are reported to be uninjured.

The apple crop in northern Kentucky promises to be the heaviest for years. The three years' rest the trees have had will show its effect not only in the yield but also in the quality of the fruit, and tens of thousands of new trees will bear this season for the first time. Peaches have, however, fared badly. The damage by the severe winter was complete, and no part of the State where the fruit is grown to any extent but what reports an almost total failure.

The Southern Fruit Journal, published at Montezuma, Ga. declares that the most flattering reports have come in from all sections of the State, showing enormous crops of peaches, pears, melons, etc. It states the peach, which is yearly double any former yield, is now safe and beyond the danger line. It freely asserts that Fort Valley and immediate vicinity has 1,000,000 peach trees that will be in full bearing this year, and a conservative statement would be one crate to each



tree—1,000,000 crates of peaches or 1000 refrigerator carloads from Houston county alone, not to speak of many other big shipping points in the State.

Reports received by the Pennsylvania Railroad Company from its representatives sent through Delaware, Maryland and the eastern shore of Virginia to examine into and report as to the probabilities of the peach and berry crop for this season, are very encouraging and in some sections the indications are that the peach crop will equal that of 1893, while increased acreage in berries will help to swell that crop.

From Michigan it is reported that the continuously cold weather has been favorable for fruit, and the outlook at present is promising for full average crops. In some localities peaches are reported low, but in others a maximum yield is expected.

The South Georgia Pear-Growers' Association met in Thomasville, Ga., April 19th, and discussed the marketing of this season's yield. It was said that if the trees produce only one barrel per tree there will be over 75,000 barrels of LeConte pears raised in Thomas county alone this year. One barrel of fruit per tree is a very low estimate to place upon the crop, for many trees produce as many as ten bushels each.

From New York State it is said to be too early to predict anything for the grape product beyond the present appearance of the vines. They are healthy, and the wood is as well preserved as it has been when the yield was enormous. The peach crop promises to be enormous from all the fruit farms along the Hudson valley. The trees are in perfect health. Taking it all in all, the outlook for an unusually successful season has never been more encouraging.

In an interview in the New York *World* of April 28th, E. L. Goodsell said: "From reports which have been collected throughout the near-by States the prospects are for an abundance of summer fruits. To supply the demand, however, we will have to go 3000 miles away, to the never-failing agricultural spring, California. Without this Golden State's product we should be badly off every summer, and with the prospects of enormous crops of cherries, which commence coming to us in May, apricots and peaches in June, plums and pears in July, and grapes in August, there will be sufficient quantities to enable the working classes to enjoy at a moderate figure these delicious products."

### As To Wheat.

The advance in wheat in Chicago and European markets, noted in our last issue, has not been wholly sustained. In Chicago, quotations for July delivery have dropped from sixty-five and a fraction to sixty-two and a fraction; but in spite of this immediate falling off the general feeling is described as bullish. It seems generally to be conceded that any considerable change must be for the better and the consensus of opinion is that from this time on the tendency of the market will be upwards.

Great importance is attached to the statistics for May 1st representing the amount of wheat on hand in the different consumptive centers, the quantities "in sight" and the crop prospects in producing countries. We had hoped to give them in this issue of the *RURAL*; but the figures have not been authoritatively reported and will hardly be available in anything like reliable form before another week. Enough is known, however, to give assurance that the situation is much more favorable for the producer than at any time since 1893.

The local market continues to be almost dormant. Every fraction of the advance thus far made has been absorbed by corresponding advances in freights. For the past two seasons the ship-owners have been as badly off as the farmers, and they are not slow to avail themselves of the chances which the past two or three weeks have put in their way. Owing to the uncertainty about the vast store of wheat at Port Costa belonging to the "Deal," the freight situation is very strong and there seems no immediate help for the wheat seller. The only notable fact in the local situation during the past week is the fact that a large milling syndicate is reported to be a heavy buyer, evidently under the theory that prices are going to advance. Of course, managers of milling syndicates are liable, like other people, to be mistaken in their judgments; but it is certainly encouraging to find buyers of experience willing to back their anticipations of higher prices to come.

There is perhaps no man on the Pacific coast whose opportunities for "sizing up" the wheat situation from a productive standpoint have been better than those of Mr. C. E. Blake, of the Walter A. Wood Co. As a seller of harvesting machinery he has visited all the wheat-growing countries again and again and is therefore personally familiar with the facts of production as they exist the world over. "There will," he said a few days ago to the editor of the *RURAL PRESS*, "always be a market for California wheat. Its quality is not excelled by the product of any other country and there is comparatively little wheat which comes into direct competition with it. There is a limited area in southeastern Australia and another limited area in Chili which produce a strictly first-grade wheat, in every way equal to the California product; but there is not much of it."

Speaking of the Argentine, Mr. Blake said that the greater part of its wheat product is inferior, as compared to ours, and that the European markets were bound more and more to discriminate against it. The apparent advantage of the Argentine over California in the matter of proximity to Europe is, Mr. Blake declares, practically not very great. The charge of getting the wheat into ships and getting the ships to sea is and must always be very great—so great as to almost counterbalance the advantage of comparative nearness to the great markets. And this must always be so, because the navigation is very difficult and the artificial works, which make it possible at all, are very costly both in construction and maintenance. Again, the labor system, while cheaper than ours, is not on the whole very economical. The employed class neither has nor wishes any interest in the country and cares nothing about anything but their day's wages. Most of them are Italians of the very lowest class, who cross the Atlantic for the season's work, returning when it is done. The idea which so generally prevails in this country that the South American wheat farmers work at a great disadvantage in the matter of machinery, Mr. Blake says is only partly true. For many years a very large share of the business of the Walter A. Wood Co. (the original company, whose works

are located at Hoosac Falls, N. Y.) has been in the Argentine States. They are heavy buyers of improved machinery and know how to make the most economical use of it.

While in no sense an agitator of the Colorado type, Mr. Blake is, as the result of his observations in the various grain countries, profoundly impressed with the notion that the price of wheat is regulated by the value of silver. His hope for the ultimate recovery of the wheat market, therefore, rests largely upon the policy of the commercial world towards the white metal. The immediate interest of the Pacific States, he thinks, is bound up in the Nicaraguan canal project. With the canal, the Argentine will have little or no advantage over California in the matter of carriage rates, and the special excellence of our wheat will give us the preference in the European markets.

### Gleanings.

OVER 40,000 acres are seeded to beets at Chino.

At Anaheim several horses have recently died from eating too freely of green hay.

ABOUT Cacheville the farmers are complaining that the rain came too late to do the most good.

At Winters it is announced that white labor will be given the preference during the coming fruit season.

THE whole capital stock of the projected creamery at Hollister has been subscribed, and it is proposed to have the plant in operation within sixty days.

THE total acreage in beets tributary to the factory at Watsonville will not be so large as last year, but all prospects are favorable for a wonderful tonnage.

THE Sperry Milling Co. has recently been a heavy buyer of wheat. They recently cleaned out the stock of the Yuba City warehouse—some 1200 tons—at 82½¢ per cental.

MRS. TYLER BEACH, of San Jose, recently sold thirty thoroughbred fowls, consisting of Black, White and Brown Leghorns and Plymouth Rocks, for shipment to Central America.

THE Sonoma *Index-Tribune* characterizes the fruit outlook as gloomy. "There will be few apricots, and Bartlett pears are dropping badly. The peach crop will also be short. Apples, plums and prunes have set heavy on the trees and there will be a big yield of each."

THE apple crop, as usual, says the *Pajaronian*, promises to be the heavy-weight fruit crop of the Pajaro valley this year. Prune growers report that the crop will be light in this valley but the quality will be improved. The trees are not heavily loaded and there is quite a drop.

THE Yolo winery has recently sold 98,000 gallons of wine to the New York firm of Sgobel & Day, at "satisfactory prices." F. Micling, the agent of the winery, estimates that the stockholders realized about \$6000 more for the stock than they would have done if it had been sold to San Francisco dealers.

THE May meeting of the State Horticultural Society, to be held at Yuba City on the last day of the month, gives promise of being a very considerable event. The local societies and fruit growers generally of the surrounding counties have been invited to participate, and it is expected that the attendance will reach several hundred.

WOODLAND *Democrat*: E. J. DePue is authority for the statement that the peach and almond crop of the Yolo orchard will be very fine this season. Both the prune and apricot crop will be short. The French prunes seem to have fallen from the trees more or less all over the State. There will be a very fair crop of Tragedy prunes, but there are not more than a thousand trees of that variety in the Yolo orchard.

A. D. LOGAN, president of the Grangers' Bank, has just returned from an extended trip through the grain producing portions of the State and reports as follows: The northern counties, Solano, Sacramento, Yolo, Colusa and Glenn, will not yield one-half a crop of grain or hay, the plant having been stunted by the excessive cold rains of the past winter, while the southern portions of the State promises a phenomenal yield.

HEALDSBURG, CAL., May 4.—Some discouraging reports are coming in from the orchardists of this section. Ira Proctor, who has one of the most extensive prune orchards in the county, said to-day that he would not have over half a crop, and that he believed, from reliable information received by him, that the output from the Russian River valley would be 300 tons short of last season's. The Bartlett pear crop is the lightest ever known in this section.

R. C. KELLS of Sutter and G. W. Hutchins of Yuba both tell the Marysville *Appeal* that prunes are falling badly this year from the trees. So serious is this fall that the prune crop will be materially lessened. This is not confined to any one locality, but we hear similar reports from Redding on the north to points in the San Joaquin valley in the south. The trees blossomed profusely; but after the fruit was formed, it began dropping and has seriously affected crops.

SONOMA COUNTY POMONA GRANGE No. 1 passed the following at its last meeting: In view of the fact through false representation of fruit buyers and consignees in the past, it is deemed for the best interests of our order that we call the attention of members of all subordinate Granges in the State to beware of shipping any fruit or produce through irresponsible parties or companies on consignments, and to thoroughly investigate the standing of such companies as may solicit the handling of fruit or produce before entering into any contract or agreement.

HURON correspondence *Visalia Delta*: It is estimated that Miller & Lux have bought 125,000 head of sheep in this section this year and placed them on their ranches near Firehaughs, and that they will shear over 6000 bales of wool this season. A few days since they loaded two trains of eighteen cars each for the Chicago market. These were all picked sheep, corn fed, and will dress 75 to 125 pounds each. Seventy-five sheep were loaded to a car, and the freight was \$170 per car to Chicago. Mutton sheep are worth five cents on the hoof in Chicago. Sheepmen here are anxiously waiting the result of this Chicago shipment, as it may open up a market for them.

POMONA, May 4.—This is proving one of the most wonderful seasons for olive-orchard planting ever known in this State.

A year ago over 400,000 small olive trees were shipped away from Pomona for orchard planting, and that was considered remarkable, but more than that number have been shipped so far this season, and there are sufficient orders already on hand to bring the aggregate up to 500,000 trees before June. It is very likely that there will be altogether about 600,000 olive trees planted in California before the season for planting closes.

IN Yolo county there is a good deal of "projecting" with reference to rural lines of electric railway. A Capay correspondent of the *Woodland Democrat* writes: "What a delightful thing it would be if Yolo county could go into a trance for the next five years and then awake to find electric roads connecting all the cities and towns of the county; the busy hum of factories run by the same power; electric energy generated by the water power now running to waste, transmitted to every home in the county; direct railroad connection between Rumsey and Woodland, or better still, between Lakeport and Woodland, and many other enterprises."

STOCKTON dispatch, May 4th: Reports received here are to the effect that the aphid, an insect that attacks the roots of grain and causes the stalks to look exactly as if rust had attacked them, has made its appearance throughout the San Joaquin valley, and great damage is feared from it. The insect is making some ravages in this county, but it is much worse to the south. Mr. Fox, an extensive rancher of Stanislaus county, says that 300 acres of his wheat will be destroyed by the insect. The aphid is a plant louse and attacks only unhealthy grain. When the atmospheric conditions that render the plant unhealthy disappear the aphid also disappears.

OROVILLE *Register*: We like the idea of a newspaper league to boom the Sacramento valley. It will be a united effort, a joint boom, a combined attempt to prove to the home-seekers of the East that that part of the great globe on which the sun shines the most brilliantly, the dew falls most refreshingly and the soil is the richest and most productive, is that part of California known as the Sacramento valley. Let us paint the glories of our fruit-yielding, flower-producing, grain-growing home with all the skill and ability we possess! Let us not hide our light under a bushel, but set it upon a hill-top that it may serve as a beacon light to attract hither the man from the Atlantic States in search of an earthly paradise.

It is currently reported that J. D. Culp of San Felipe has renewed support for his claim of the profitability of tobacco growing in California. The San Felipe ranch last year sent East about 80,000 pounds of leaf and wrapper tobacco—the product of three seasons. Some of this was sold to Powell, Smith & Co. of New York, the experts of that firm giving the stock great praise for its quality. This year the ranch will produce about 20,000 pounds, and the present outlook is that this will all be marketed among local manufacturers. California tobacco brings from 25 to 75 cents or \$1 a pound, and at these figures Mr. Culp thinks many California farmers could make it a valuable adjunct of their regular crops.

THE Colusa *Sun* has no sympathy with the socialistic sentiments just now so much abroad in the land. It says: Fred Schutz, now a capitalist of Oakland, called on us Saturday. He came to Colusa county away back in the fifties with a little band of sheep. He took care of them himself, and when shearing time came he himself took the wool off and hauled it to market. When he began wheat growing he did all his own blacksmithing, his wagon work, keeping all his machinery in repair with his own labor; in short, he did not squander his means, and now as age grows on apace he looks from his comfortable home on a competence. He still owns his large farm in Colusa county. Now why should the man who has spent the money earned in youth demand one cent of that saved by such a man for his support? Opportunities come to some men; some men make opportunities.

W. L. SANDERS, of Union School District, Butte county, has been talking to the *Register* man about big eggs. He says: "I have the Partridge Cochins and their eggs are enormous. I measured one of the ordinary eggs and it was over eight inches by six and one-fourth. These hens, however, lay larger eggs than that, for this was but an average one. They are the largest eggs I ever saw. I have had the Plymouth Rock, the Leghorns and other breeds of chickens but never had any that were such layers as these Cochins. They lay early and we have plenty of eggs all winter. They are easy to keep and don't fly over fences, like other fowls. They lay regularly and lay very large eggs, thus making them a very valuable breed to keep. I have never weighed a dozen of the eggs to see how they compare with those of other breeds, but know they are considerably larger."

THE fruit cannery at Marysville is filling in the off season by doing a big job of vegetable canning. We take the following with reference to it from the *Appeal*: "The peas were planted early in the season on the Harkey tract in Sutter county. When they started up out of the ground the vast sea of green caused a number of people who passed that way to look askance at such a large pea patch. They wondered what in the world was to be done with such a lot of peas. That there would be a 'pile of them' was evident from the white blossoms that covered the field. How could they be gathered and shelled? Why, it would take all the people in the county to shell such a quantity. But shelling them was the easiest part of the scheme; what was wanted was peas, and lots of them. And they came. The Harkey tract is covered with peas. There are four varieties, those that were picked first being a small French variety, of which but a few rows were planted for test purposes. The other varieties were ready for the pickers on Monday, and a swarm of people engaged in the work. The peas are taken to the cannery after being gathered, and there they are run through a series of new machinery recently brought from the East and set up for this special work. The first piece of machinery looks something like a threshing machine, and is known as a 'huller'; it knocks the peas out of the pods without damaging them in the least. The 'huller' delivers the peas to a 'carrier' which in turn dumps them into a 'separator,' this machine blowing out all the small bits of pods and grading the peas into three sizes. From the 'separator' the peas go into a 'blancher,' where they are steamed or blanched and are then passed into a tank of pure cold water in which they rest for a very short time before being canned and sealed up. When sealed the peas are ready for the steam cooker which is an immense boiler-iron cauldron and stands a steam pressure of 180°. Here the process ends, and the canned peas are ready for the labels and the epicures."



### Santa Clara Fruit Exchange.

#### Summary of the Year's Business—Facilities to be Increased.

The report of the President and Manager of the Santa Clara Fruit Exchange, delivered at the annual meeting of stockholders held last Saturday at San Jose, shows that during the past season a total of 4,974,629 pounds of dried fruits passed through the Exchange warehouse. The classification of this vast aggregate was as follows:

|                     | Pounds.   |
|---------------------|-----------|
| Prunes.....         | 2,963,804 |
| Peaches.....        | 570,292   |
| Apricots.....       | 987,509   |
| Peeled Peaches..... | 24,508    |
| Silver Prunes.....  | 144,363   |
| German Prunes.....  | 13,068    |
| Pears.....          | 95,601    |
| Plums.....          | 50,071    |
| Pitted Plums.....   | 13,611    |
| Cherries.....       | 19,269    |
| Apples.....         | 17,649    |
| Ruby Prunes.....    | 1,266     |
| Whole Peaches.....  | 1,616     |
| Whole 'Cots.....    | 4,992     |
| Nectarines.....     | 3,612     |
| Almonds.....        | 33,004    |
| Walnuts.....        | 1,924     |

Total.....4,974,629

On Saturday last—May 4th—the stock on hand was as follows:

|              | Pounds.   |
|--------------|-----------|
| Prunes.....  | 1,034,118 |
| Peaches..... | 37,065    |
| Almonds..... | 1,605     |
| Walnuts..... | 1,000     |

Total.....1,073,788

There was received in cash \$174,252 33 under the following classifications:

|                         |              |
|-------------------------|--------------|
| Fruit Sales.....        | \$133,450 50 |
| Business of 1893.....   | 1,816 56     |
| Bills Payable.....      | 35,000 00    |
| Dividends, Etc.....     | 60 30        |
| Stock.....              | 175 00       |
| Sacks and Boxes.....    | 1,648 82     |
| Union Savings Bank..... | 5 15         |
| Insurance.....          | 3,096 00     |

Total.....\$174,252 33

The disbursements for the year were as follows:

|                                   |            |
|-----------------------------------|------------|
| Expenses—Taxes, Postage, Etc..... | \$ 411 43  |
| Telegraph.....                    | 224 85     |
| Stationery.....                   | 38 45      |
| Printing.....                     | 122 50     |
| Advances.....                     | 133,344 73 |
| Sacks and Boxes.....              | 6,407 95   |
| Fuel.....                         | 98 75      |
| Salaries.....                     | 2,371 88   |
| Payroll.....                      | 3,098 14   |
| Stock Account.....                | 1,248 70   |
| Warehouse Expense.....            | 275 85     |
| Bills Payable.....                | 16,000 00  |
| Business of 1893.....             | 1,153 53   |
| Insurance.....                    | 1,427 90   |
| Freight and Cartage.....          | 542 96     |
| Interest.....                     | 1,168 93   |
| Storage.....                      | 200 00     |
| Fruit Account.....                | 108 40     |
| Balance on Hand May 1, 1895.....  | 6,007 88   |

Total.....\$174,252 33

The following statement will exhibit some of the actual expenses of the transaction of business, and will include virtually all expense the contributors have incurred by their combining here over what they would have by individual transactions:

|                                  |            |
|----------------------------------|------------|
| Manager's Salary.....            | \$1,350 00 |
| Book-keeper's Salary.....        | 900 00     |
| Stenographer and Typewriter..... | 273 00     |
| Telegraph and Telephone.....     | 224 00     |
| Stationery.....                  | 38 45      |
| Taxes, Postage, Etc.....         | 411 00     |
| Printing Bulletin, Etc.....      | 122 50     |

Total.....\$3,320 33

In regard to prices realized for various kinds of fruit, President Hersey made the following quotations: Silver prunes brought from 5½ to 7½ cents, net cash. Some pears sold as low as \$1.20 per 100 pounds. There was also a wide range in the value of this fruit on account of the quality and appearance. Other pears sold for 13 cents a pound, and the average was from 5½ to 6½ cents per pound. A very large proportion of the dried pears, however, sold for from 2 to 3½ cents per pound. For good pitted plums from 6½ to 7 cents was realized. The pitted Hungarian prunes take on a beautiful red color if sulphured, and sell for from 9½ to 10 cents per pound. Dried cherries have as yet scarcely been introduced in the market, but the Royal Ann variety brought from 8½ to 9½ cents in boxes, delivered. Dried Governor Wood and Black Tartarian varieties are hard sellers. For egg plums, pitted, 4 cents a pound, net cash, was realized to the grower. The color, without regard to anything else sells them.

This year was a hard one for almonds. For some 8½ cents per pound had been realized, but the average price was 3½ to 5½ cents. A number are now seeking purchasers for good almonds for 5 cents. Some method must be devised to prevent almonds from becoming rancid.

These statements were received by the stockholders with every evidence of approval. President Hersey was heartily applauded on every hand, and when it came to the voting for directors for another year, the old board was re-elected by unanimous voice, as follows: Philo Hersey, President; F. M. Richter, Vice-President; Noah G. Rogers, Secretary; Union Savings Bank, Treasurer; C. F. Wyman, J. T.

Grant, G. A. Bean, H. C. Morrell, W. H. Wright, H. G. Keesling.

President Hersey, in the course of his report, having recommended an enlargement of the warehousing facilities of the Exchange, the matter was briefly discussed, after which a call was made for all who, in promotion of this project, would subscribe for additional stock in proportion to the cost of the work. Nearly every person present stood up. This was very justly deemed significant as illustrating in the most practical way satisfaction with the Exchange system, and a willingness to invest still further in facilities for carrying it out.

The balance of the meeting was largely devoted to discussion of crop prospects and other matters of immediate local interest. Adjournment was had to Saturday, the 18th, when plans for the coming season are to be determined.

### Rainfall and Temperature.

The following data for the week ending 5 A. M., May 8, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA         | Total Rainfall for the Week | Total Seasonal Rainfall to Date | Total Seasonal Rainfall Last Year to Same Date | Average Seasonal Rainfall to Date | Maximum Temperature for the Week | Minimum Temperature for the Week |
|--------------------|-----------------------------|---------------------------------|------------------------------------------------|-----------------------------------|----------------------------------|----------------------------------|
| ATLANTA.           |                             |                                 |                                                |                                   |                                  |                                  |
| Eureka.....        | 99                          | 41 76                           | 52 22                                          | 40 83                             | 64                               | 42                               |
| Red Bluff.....     | 18                          | 28 40                           | 19 70                                          | 24 02                             | 80                               | 50                               |
| Sacramento.....    | 16                          | 23 00                           | 14 19                                          | 20 54                             | 74                               | 50                               |
| San Francisco..... | 05                          | 25 41                           | 16 60                                          | 23 54                             | 64                               | 48                               |
| Fresno.....        | 26                          | 14 14                           | 6 27                                           | 10 56                             | 84                               | 46                               |
| Los Angeles.....   | 13                          | 15 88                           | 6 53                                           | 19 46                             | 85                               | 44                               |
| San Diego.....     | 14                          | 11 56                           | 4 09                                           | 10 39                             | 80                               | 42                               |
| Yuma.....          |                             | 2 97                            | 2 16                                           | 3 53                              | 108                              | 56                               |

### Weather and Crops.

Director Barwick of the California Weather and Crop Service summarizes as follows for the week ending May 6, 1895:

The average temperature for the week ending Monday, May 6th, was for Fresno 64°, Independence 62°, Los Angeles 62°, Red Bluff and Sacramento 60°, San Francisco 56°, San Luis Obispo 58° and San Diego 64°.

As compared with the normal temperature there was a heat deficiency of from one to five degrees, except at San Diego, where an excess was reported of four degrees, while Los Angeles was normal.

The total precipitation for the week was for Fresno .50 of an inch, Independence a trace, Los Angeles .10, Red Bluff 1.20, Sacramento .30, San Francisco .30, San Luis Obispo .40 and San Diego .10.

As compared with the normal precipitation there was an excess at Fresno of .36 of an inch, Red Bluff .78 and San Francisco .04, while a deficiency was reported from Sacramento of .10 of an inch, Los Angeles .05 and San Diego .03.

The deficiency of heat and excess of moisture and cloudy weather in the upper Sacramento valley and in the greater portion of the San Joaquin valley have greatly increased the prospect for late-sown grain to make a tolerably fair crop, and have also extended the life of the valley pasturage, but retarded the ripening of early fruits and berries and slightly damaged hay in all portions of the State where cut.

Pears, apricots and prunes appear to be a short crop, while some fruit is dropping on account of lack of sunshine.

Peaches will no doubt be a very good crop, as favorable reports are received from the peach belts of the State, although curl leaf is reported in some orchards.

The fruit crop appears to be considerably shortened by the excessive dropping, no doubt due to late frosts in April and excessive moisture along the rivers, where a great deal of the fruit is grown.

Oranges and lemons are making a vigorous growth for so early in the season.

Hay will be a pretty fair crop and of good quality. Hops are doing well, and training will commence in about ten days more, or less, according to the locations of the yards.

The greatest need at present is plenty of sunshine and warmth, without the hot, drying northerly winds which are sometimes prevalent during the last of May and first of June.

Altogether, the past week's weather has been most favorable for all products grown in this State.

### Sonoma and Napa.

SONOMA (Santa Rosa)—The frost seems to have been more severe on young peach trees than old, the latter being, in many cases, fairly well loaded, while the former have scarcely any fruit. (Healdsburg)—A green worm, about one-sixteenth of an inch in length, is giving some of the prune-growers in this locality much trouble and threatens to play havoc with the prune crop which, at best, is a light one. (Forestville)—

All fruits now look well. There is very little curl leaf noticeable in this locality. (Sebastopol)—Cherry crop will be light; pears show considerable scab, and are not as good a crop as expected. Salway peaches affected by curl leaf, and some other kinds of peaches are not maturing well. Prunes are dropping somewhat, but a fair crop is expected. Vines look well.

NAPA (Napa)—Hay and grain doing well; fruit and berries the same. The rains of the past week have been of great benefit to all crops.

### Alameda and Santa Clara.

ALAMEDA (San Leandro)—The fruit outlook is generally very good. Right around here there will be a larger apricot crop than was first thought; also the same with regard to the cherries and other fruits.

SANTA CLARA (Gilroy)—In this county the precipitation was not badly needed, but is none the less welcome, as it makes the assured confidence previously entertained doubly sure that we are to have one of the grandest agricultural seasons this year ever experienced. Even the apricots, cherries, prunes and peaches are reported to be not so badly hurt as at first thought. (Santa Clara)—Cherries are earlier this season by about two weeks, and picking will commence in some localities by the middle of May. (Cupertino)—Our people are still thinning out apricots; the prunes are thinning themselves out too effectually for our orchardists' liking. The apricots are noticeable by their scarcity in some sections. Cherries are about half a crop.

### Mountain Counties.

LAKE (Middletown)—Crops of all kinds are looking fine. (Kelseyville)—The rainfall was timely and sufficient for the present. No frost followed and the fruit prospect is very good.

PLACER (Rocklin)—Everything looking well. (Newcastle)—Some orchards badly affected with curl leaf. Cherries, plums, apricots and pears a light crop. Peaches a fair crop.

NEVADA (Chicago Park)—Kelseys and almonds are a small crop. Hungarian and French prunes, early and late peaches and Bartlett pears are an excellent crop.

### Coast Counties.

SAN BENITO (Hollister)—This section has escaped injury from the late frosts. The trees are all in splendid condition, and the crop of apricots will be fully up to the average.

SAN LUIS OBISPO (San Luis Obispo)—The rains of the week have made crops sure. (Templeton)—The crop of grain east of the river will doubtless be above the average crops, but the outlook for the country to the west is for a double crop.

SANTA CRUZ (Santa Cruz)—Weather good for all crops. Fruit doing well.

### San Joaquin Valley.

KINGS (Hanford)—Fruit prospects excellent. (Madera)—The rain this week insures the best crop of grain ever raised here. In the fruit line, apricots have dropped some and prunes very badly. Cutworms are working out the grapes.

STANISLAUS (Crow's Landing)—Crop prospects continue to be excellent. (Westley)—Weather very favorable for growing crops.

TULARE (Tulare)—Fruit crop the same as last week, with the exception that more is falling off. Prevailing northwest winds.

### Sacramento Valley.

BUTTE (Hercules)—We will have fine peaches this year. (Palo Verde)—Pears have been attacked by the "blight fungus," and are falling off quite extensively, and the crop will be very light. Apricots are falling some, but it is said we have good prospects.

SACRAMENTO (Sacramento)—Cherries are a light crop. Prunes are quite shy. Pear blight not improved by damp weather. (Trask)—Damp weather for past week not favorable for fruit. Fungus or mildew appearing on peaches, with some curl leaf. Pears and plums dropping badly. Apples and cherries good.

SOLANO (Dixon)—Barley is ripening fast on the higher lands, and from present appearances some fields will be ready for the harvest before June 1st. (Suisun)—The first ripe apricots of the season were shipped from this point on Wednesday, the 1st inst.

TEHAMA (Corning)—All crops doing splendidly. Trees growing fine. Fruits of all kinds will be better crops than previously reported. (Red Bluff)—A very large grain crop is now insured. Warmer weather the coming week will put the fruit crop in good shape.

YOLO (Davisville)—Never saw the grain fields look finer at this season of the year. Apricots, prunes, plums and pears are doing well.

YUBA (Marysville)—In some orchards curl leaf has made some progress in the varieties of peaches most susceptible of it. Pears are dropping, and the crop will be short. Most orchardists have stopped thinning until they see what will follow.

### Southern California.

LOS ANGELES (Pomona)—Apricot and French prune crop is less than one-half.

ORANGE (Tustin)—Some apricot growers report prospect as one-fourth to one-half crop. Prunes promise a good yield. Walnuts vary, but outlook is generally good.

VENTURA (Saticoy)—Prunes are dropping from the trees for lack of sunshine. (Ventura)—In a few fields where the soil is warm corn has been planted and is up; same is true of Lima beans, also, but the majority of farmers have not yet begun planting. Soil is in excellent condition.

SANTA BARBARA (Pine Grove)—Cots and Winter Nellis pears are rather thin on the trees, but all other varieties will yield abundantly.

### White Arsenic vs. Paris Green.

TO THE EDITOR—The following letter and answer may be of interest to your readers:

DEAR SIR:—Is there any difference in the strength of the common white arsenic of commerce and Paris green? Can I use either one with the same effect in spraying trees? Will it do to mix the two together? \*

DEAR SIR.—According to recent analyses at this station, Paris green contains between 54% and 56% of arsenious acid in combination chiefly with copper. White arsenic is nearly pure arsenious acid and is thus nearly twice as strong as Paris green. White arsenic is much more apt to injure the foliage because it is more soluble than Paris green. The solubility is increased if the water is warm or if it contains any acid or alkali in solution or if it is soapy, so it is scarcely safe to mix in any quantity with other washes. If stirred up in water, and applied at once before any has become dissolved, it is entirely safe. It is more difficult to keep it well mixed in the water than is Paris green, and will so require more care. There is no advantage in mixing the two, and it is said that they become more soluble when mixed.

C. W. WOODWORTH,

University of California, Berkeley.



## THE DAIRY.

## The Age Requirement in the State Fair Dairy Test.

TO THE EDITOR:—I would like to know if the following, in reference to the premiums offered for butter cows at the next State Fair, means an excess of .072 of an ounce per day, or for the entire seven-days' test:

In the two, three and four-year-old classes, when one cow exceeds another in age, for each day's difference in age, she shall be required to produce in excess of the younger cows competing in the class .072 of an ounce of butter fat. No increased production of butter fat will be required for difference in ages of cows when five years old and over.

I understand it to mean the whole of the test, but not being well versed in these "hair-splitting" theories on dairy management, I merely wish to be corrected if I am wrong. For troubling you on such a trifling subject I hope you will excuse

A WORKING DAIRYMAN.

REPLY BY SECRETARY E. F. SMITH.

TO THE EDITOR:—In explanation of the Dairy Contest to take place at the State Fair of 1895, and to reply to "A Working Dairyman," whose query appears above, I will repeat the conditions appertaining to the query.

It will be remembered that cows from two years to five years old and over are classified as to ages—that is to say, there is a class for two, three, four, and five-year-olds and over with the following standard of merit: "Any two-year-old cow producing less than .80 pounds of butter fat per day, and any three-year-old cow producing less than 1.03 pounds of butter fat per day, and any four-year-old cow producing less than 1.26 pounds of butter fat per day, and any cow five years old and over producing less than 1.49 pounds of butter fat per day, shall be dropped after a second day's trial and be excluded from the contest."

This condition is given for the purpose of fixing the standard, as it would not be advisable to continue a larger number of cows that are far below the requirements of the butter-producing animal; so it must be that the two-year-old cow shall give twenty pounds of milk per day that will test four per cent in butter fats, while the older cows must produce proportionately larger quantities of milk.

During the seven days' contest two-year-old cows will have to produce 5.60 pounds butter fat, equal to seven pounds marketable butter, when calculated on a basis that each pound contains eighty per cent pure butter fat. All cows, three, four, and five years old and over will have to produce during the seven days' contest, upon this same calculation, a fraction over nine, eleven and thirteen pounds marketable butter, respectively.

As to the other conditions reading as follows: "In the two, three and four-year-old classes, when one cow exceeds another in age, for each day's difference in age she shall be required to produce in excess of the younger cows competing in the same class .072 ounces butter fat. No increase production of butter fat will be required in difference of ages of cows when five years old and over."

As it must be conceded that it would be manifestly unfair for a two-year-old cow to compete with a three, four or five-year-old cow, it becomes necessary to handicap, as it were, the older cows; and, to this end, the older cows in each class are required to produce, during the seven days' contest, a quantity of butter fat which shall equal to .072 ounces for each day's difference in the age of the animals. For example: When one cow exceeds another in age by 360 days, she must produce, during the seven days' contest, 1.62 pounds butter fat, or a fraction over two pounds marketable butter, in excess of the younger cow in same class.

Or, suppose there was a difference in age of ninety days. In this case the older cow would have to produce, during the seven days' contest, .405 pounds of butter fat, or a fraction over one-half pound marketable butter in excess of the younger cow.

To arrive at this, a calculation is made as follows: Multiply .072 by 90—the number of days' difference in age—and the result, 6.48, will be the number of ounces of butter fat, and this amount, when divided by sixteen, the number of ounces in a pound, equals .405 pounds of butter fat; and this latter sum, divided by .80, gives a fraction over one-half pound, which represents the amount of marketable butter that the older cow must produce during the seven days' contest, in excess of the younger one when the difference in age is ninety days.

I trust this matter is clear to all concerned, and would say that we do not desire to insert "hair-splitting" conditions, but merely to keep up with the times, and use a little science in the breeding of dairy stock.

The lack of proper scientific knowledge in many of our agricultural pursuits has proven a great loss to its followers. I do not maintain that all must be thoroughly educated in scientific methods, but that a system should be followed in producing all kinds of agricultural produce that will show to the producer at the end of the season the difference between a profitable and an unprofitable product.

It is a similar method that shows to the grain

grower the cost of production and the results of sales, whether or not the latter justifies the former.

Competition is now so great in all pursuits of life that expenses must be figured to a nicety, call it hair-splitting if you will. The "Working Dairyman," if he is practical, shall know that in all well regulated dairies in the thickly populated States of the Union the feed is weighed in to the animal, and the milk weighed out; and whenever the cow fails to come up to the standard that shows she is paying a profit she is turned over to the butcher and one of improved breed takes her place.

All we desire is to urge by competition the following of this method among the dairymen of the State.

EDWIN F. SMITH, Sec'y.

## HORTICULTURE.

## Experience With the Kelsey Japan Plum.

TO THE EDITOR:—I have just read an article in your paper of the 20th about Kelsey Japan plums, and as I have several of them, will tell you my experience with them. In 1889 I planted some twelve trees. They had little fruit the second year; made good growth but the fruit was not perfect, leaving a place on the end of the fruit which stopped growing before it had its full size. The third, fourth and fifth years they were loaded down with fruit, some measuring from six to six and one-half inches around and more perfect in shape than before. They are tolerable large trees now, and have been full of blossoms again. One or two trees seemed to have but few more fruit on them than they could bear, and they don't seem to grow as well as before.

In 1890 I planted some 300 trees on another ranch, on the mesa about five miles east of the city (the former being on lot 89 La Mesa Colony, ten miles east of San Diego, on high lands). The larger planting was on red land. They had lots of fruit on the second year, but, as before, the fruit was not perfect in shape. The third year they were loaded with fruit almost to break-down, and of better quality. The fourth year I had bad luck with them. A flock of deer got into the orchard several times, eating up the green fruit and leaves and breaking the trees down, so as to kill over 200 trees. The balance are also more or less hurt, but are full of blossoms again.

As to the use of the fruit, I found them delicious, when perfectly ripe. They also made excellent jams, but for preserves they cook rather soft. As to drying, I have not yet made any attempt, and would like to know from some one if they can be dried.

The deer and birds spoiled a great deal of the fruit. The latter pick them and the bees suck all the juice out, leaving but the outside skin.

As for shipping quality of Kelsey, I think they are most too tender skinned and will easily get damaged, unless very carefully packed.

My trees grew almost too thriftily. They made limbs six to seven feet long and perfectly covered with fruit, leaving hardly a space for a single leaf. I would like to have others give their experience with the Kelsey. Respectfully,

San Diego, Cal. J. H. WRANPELMEIER.

We hope all Kelsey growers will give us briefly their conclusions on this fruit for publication.

## Guarding Against the Dried Fruit Moth.

By J. H. THOMAS; read at the Tulare Farmers' Institute.

A well-constructed storage house should be built, having a capacity sufficient to hold the entire product of the orchard without being crowded. The building, if made of brick, in this warm climate ought to have hollow or double walls, and also be of sufficient width to have a row of bins on each side of the center and space enough to run the car track from the drying grounds through the building. If made of lumber the walls should be double and a six-inch space left between them, this to be filled with sawdust, chaff or fine straw. The building should have a double ceiling and be well ventilated near the top, with sufficient aperture to carry off the foul air. The ventilators should be covered with a fine wire netting to keep out the moth which deposits its eggs in the dried fruit. This moth is about the size of a small house fly. The building should be divided into bins so as to keep the different kinds and grades of fruit separate.

The fruit, when dry, should be taken from the drying grounds at the middle of day, while the fruit is warm, as the egg that might have been deposited during the evening or morning previous to the taking up of the fruit will be killed by the warm sun. The moth deposits its egg late in the evening and early in the morning.

The storage house should be well fumigated by burning sulphur in it for one or two hours, after having closed the house tightly so as to retain the fumes of the sulphur. Canvas covers, to conform to the size of the bins, should be made to spread over the fruit. The canvas answers two purposes, one being

to keep the dust from the fruit and the other to stop the air from discoloring it and also to prevent the moth getting in to deposit its egg, as it does not work in the dark; this being so, the storage house should be kept practically dark and the fruit will keep better and retain a much brighter color.

When fruit is only intended for home use and not for the market, it should be taken up in the middle of the day when well dried and when the sun is at its greatest heat; then sack or box it and put away in a dark cellar or room. If so handled there need be no further fear of worms bothering the fruit.

## Fruits in Fresno County.

George C. Roeding, of the Fancher Creek Nursery, and an earnest student of the horticultural capabilities of his region, writes an interesting article for the *Fresno Republican*, from which we take the following: It is an unfortunate but indisputable fact that those who embark in fruit culture are too often influenced into planting the fruit which happens at that time to be bringing the highest price in the market, regardless of whether their land is fitted for it or not. This was aptly illustrated a few years ago when raisins were commanding such high prices, and in consequence thereof the Muscat grape was universally planted to soils good, bad and indifferent, and even those who had orchards dug them up and planted Muscat vines, being confident that raisins would maintain their, at that time, very remunerative price, and dried fruits being low would continue to remain so. To-day the opposite is occurring, vineyards are being dug up and replanted with fruit trees, and in many cases it would have been far better had they never been planted, for there are thousands of acres which would without question have proven more profitable had they been planted to something else. In making this statement I do not wish to be misunderstood, for in my opinion no better raisins can be produced than those made in this county, and that this is a fact is emphasized by the active competition which exists between our raisins and the imported product.

All of our lands, however, are not adapted to the Muscat grape, but with our great diversity of soil there is hardly a variety of fruit indigenous to the temperate or semi-tropical zones which will not thrive here and prove profitable. It will be needless to go over the long list, and I will therefore confine myself to only such varieties as are a success, but which, for some unaccountable reason, have not had the attention they deserve.

Strange as it may seem, it is nevertheless a fact that apples, a fruit, especially the winter varieties, which always commands a good price with our local fruit dealers, are the least in demand of our deciduous fruit trees. Our upper foothills and many valleys in the mountains are so admirably adapted to their successful and profitable production, the fruit being large and highly flavored and possessing excellent keeping qualities, that it is to be regretted that apple culture is not receiving more attention than it does. Our apples are fully equal, and even superior, to apples grown on the coast, which are annually shipped in here to the extent of many carloads. On the plains the apples should only be planted for home consumption; trees bear well, but the fruit has no keeping qualities, and winter varieties change their characteristics so much that they ripen in midsummer.

The almond has been neglected probably more through prejudice than for any other reason, and this has arisen not because the almond will not bear here, as many suppose, but it is due to the fact that the varieties heretofore planted will not only not bear here, but in no part of the State; but with the improved California varieties there is no reason why success should not crown the efforts of any one engaging in their culture on the right soil. Peaches have been more largely planted than any other deciduous fruit, but there are lands to-day devoted to peaches which would prove far more profitable in almonds; I refer to the very sandy soil, on which the almond not only grows well, but is also a prolific and regular bearer.

The olive is rapidly becoming popular, and in our sandy, well-drained soil will be a most valuable acquisition to our list of fruits. In no place in the State do they bear so heavily as here, nor in thriftiness of growth can they be equalled. All the orchards which have thus far been planted are young, but the increasing demand for trees by those who have made a start in the business, and by their neighbors who have had opportunities to witness the thriftiness of the trees, is sufficient indication of the confidence of many in the future of the olive.

The position which Fresno county has taken as a grower of citrus fruits is best exemplified by the shipments of the golden fruit during the past season, consisting of about ten carloads, the product of young orchards in the vicinity of Centerville. The great point in our favor, and one that cannot be underestimated, is the early ripening of our oranges, which mature from four to six weeks earlier than those grown in the southern part of the State, thus



giving the benefit of an early market, which always, as with other fruits, pays by far the best. The fine texture and juiciness of the pulp of our oranges, combined with the thinness of the skin, is generally conceded, and in addition to this having an abundant supply of water, a most essential factor in their successful culture, there is no reason why the successful growing of citrus fruits should not be extensively engaged in.

Through the kindness of J. P. Vincent, our assessor, I have obtained the following figures, compiled from the assessment roll of 1894, showing the acreage devoted to vines, as well as the number and varieties of the different fruit trees planted in the county; and although the figures may not be entirely correct, they are interesting, from the fact that they give an excellent idea of the great difference between the acreage of fruit trees and vines, and also show the relative difference in the number of the various varieties of fruit trees planted. The following is a copy of the report:

| Grape Vines.        |          | Acreage.     |
|---------------------|----------|--------------|
| Table grapes.....   |          | 23           |
| Raisin grapes.....  |          | 51,781       |
| Wine grapes.....    |          | 1,336        |
| Total.....          |          | 53,140       |
| Fruit Trees.        |          |              |
|                     | Bearing. | Non-bearing. |
| Apples.....         | 8,422    | 15,569       |
| Apricots.....       | 50,809   | 26,693       |
| Cherry.....         | 789      | 1,426        |
| Fig.....            | 19,320   | 23,285       |
| Olive.....          | 6,317    | 7,142        |
| Peach.....          | 111,841  | 185,108      |
| Pear.....           | 58,652   | 60,667       |
| Prunes, French..... | 8,723    | 25,708       |
| Prunes, others..... | 7,025    | 21,707       |
| Lemons.....         | 95       | 898          |
| Oranges.....        | 4,611    | 6,635        |
| Almonds.....        | 794      | 3,878        |
| Nectarines.....     | 1,163    | 2,303        |
| Total.....          | 277,960  | 370,660      |

Making a total of 658,827 trees, and estimating them to be planted at an average of 24 feet apart (75 trees to the acre), we would have 8781 acres in fruit trees. The small acreage devoted to fruit trees in this county to-day shows that there is still a large field open for the planting of many lands now used for grain, and with our advantages for handling fruits there is no reason why the acreage should not be rapidly extended. A few years ago our northern neighbors, who grew fruit without irrigation, scoffed at the idea of Fresno ever becoming a competitor in shipping green fruit to the Eastern market, for, they said, "your fruit will be so watery that it will not keep." The prices which have been realized, however, for our green fruit when sold side by side with theirs, is ample evidence that their supposition was without foundation. One of the greatest advantages, however, is our long, dry summer, which not only has the effect of causing our fruit, in point of flavor and size, to reach perfection, but also gives us the benefit of drying them without resorting to any artificial means, thus producing a better article at comparatively little expense.

## THE FIELD.

### Historical Notes on Beet Sugar in the United States.

TO THE EDITOR:—The first attempt to make beet sugar in this country was made near Boston some time between the years 1826 and 1830, but, owing to the fact that it was conducted on a very small scale and proved a failure, writers on the subject usually ignore this attempt and give Philadelphia the credit, giving the date as 1830.

The third factory was built at Northampton, Mass., in 1838, and it is interesting to note that this plant, although it had but two predecessors, made a great stride toward the cheap production of sugar by reducing the cost per pound to fourteen cents. Chetsworth, Ill., claims the fourth factory (1863), which was operated for six years and was then abandoned. In 1866 the fifth factory was established in Fond du Lac, Wis., but in 1869 it was removed to Alvarado, California.

At the time of its removal to this coast the price of sugar was very high—so high, in fact, that its owners were encouraged to put this plant into immediate operation. It managed to run for four consecutive years at a small loss to its owners, and was then again moved, this time to Soquel, near Santa Cruz, where the buildings are still standing.

The seventh factory to be built in the United States (being the second in California) was erected in 1871, at Brighton, near Sacramento, and it was here that the first diffusion battery in America was operated. This factory was closed about four years after its erection.

The Isleton factory was built in 1873, the original intention being to manufacture sugar from watermelons, but upon the failure of this an attempt was made to obtain sugar from the beet. The beets used, however, were of inferior quality and we have another failure to record. In all probability this would have been the first successful factory in this

country had they a better quality of beets, as their machinery was of the most improved style and the factory throughout was well equipped.

The Standard Sugar Co. was organized in San Francisco, with a capital stock of \$50,000, in 1879. This company purchased the Sacramento works, at a cost of \$12,000, and moved it to Alvarado. The first season's run netted a clear gain of \$1411.73, which was the first money actually made in the United States from the manufacture of beet sugar. This factory continued to run on a paying basis for eight consecutive years, the greatest earnings for a single year being \$44,732.35. At the end of the eighth year the low price of sugar made it necessary to get more improved machinery, so, in 1888, a new company was formed and the present factory was built. This company, known as the Alameda Sugar Company, is still operating its plant. The Watsonville factory was built in 1885, and in 1892 it was enlarged to 700 tons capacity, making it the largest beet sugar factory in the United States.

The factory at Grand Island, Neb., was built in 1889, and the factories at Lehi, Utah, Norfolk, Neb., and Chino, Cal., were all built in 1891. These factories are about the same in size, slicing about 400 tons of beets in 24 hours.

At the present time there are six factories in the United States, and from the latest reports it is estimated that during the season of 1894-95 the total output was about 21,000 tons, or 42,000,000 pounds of sugar.

In Europe there are about 2500 factories, large and small, and the annual product is about 4,655,000 tons.

The following interesting statistics furnish a good illustration of the growth of this industry. In Europe, in 1814, there were 334 factories, their total output being 7,700,000 pounds of sugar. Now the single factory situated at Watsonville produces considerable more than this amount annually, and there are factories in operation in Germany to-day which turn out twice as much sugar per annum as the Watsonville concern.

*Causes of Early Failures.*—From the above it will be seen that all factories which were installed before 1879 proved total failures, and all the causes of failure are probably included in these reasons: Improper machinery and methods; utilizing inexperienced instead of skilled labor; ignorance as to the proper variety of beets, and poor judgment in the selection of sites and bad management in general.

*Beet Culture Methods.*—The present methods of cultivation and treating of the beets at the factory differ slightly at the various factories, but may, in general, be roughly described as follows:

The land is plowed in early spring to a depth of six to fourteen inches, and about the first of April it is again plowed to a depth of six to ten inches. The surface soil is thoroughly pulverized about two weeks before the seed is sown, the seed being drilled in rows from fifteen to eighteen inches apart. When the young beets are sufficiently large they are thinned out so that there will be a beet about every five or six inches in the row. Weeds are kept down, of course, and the ground loosened. Beyond this they require no special care until the harvest, which begins about August 1st, depending on the locality and the season. The beets are loosened in the ground by the beet plow and are then gathered, topped and hauled to the beet sheds, where they are weighed and stored.

*Factory Methods Outlined.*—The beets are conveyed from the shed into the factory by a flume carrying water, and as they pass along they are caught up by the beet wheel, where they are rinsed in clear water and then raised by a chain elevator to the hopper of the slicer. The cossetts, or sliced beets, are then allowed to slide down a revolving chute, which feeds them into the cells of the battery, where the sugar is soaked out by the "diffusion" process. The "liquor" then passes on through pipes to the calorizator or heaters, where the liquor is raised to a temperature of from 80° to 90° C. This is done to coagulate matter which will not coagulate after liming without redissolving. It next goes to the "carbonator," where it is treated with milk of lime and carbon dioxide to obtain coarse granular precipitation.

It is then forced through the filter presses and "treated" again in the second pans, where the alkalinity is further reduced. It is again passed through filter presses and collected in the third, or sulphur pans, where it is treated with sulphur dioxide gas. After the final filtration in the third presses it appears as an almost water-white solution, and is then evaporated, passed through the bag filters, and is ready for granulation in the vacuum pans, which practically completes the process.

H. T. D.

### Mixed Farming in California.

At the last Farmers' Institute there was considerable attention given to the advantage of systematic work in agriculture and the effort to diversify products so as to greatly reduce purchased supplies. One essay was by Major C. J. Berry of Visalia, and we take the following extract:

I maintain the very first duty of a farmer is to

grow enough for himself and family to eat. He can raise everything on his farm cheaper than he can buy it, if he can raise it all. No farmer in this productive county ought to be hard up; if he is, it is his own fault. He does not give thought to his business. He does not keep any account of his farm. He does nearly all of his work by guess and haphazard; and if he meets failure, he has no book to show to his creditors what caused it, and they look upon him as they would upon a store-keeper who fails and does not keep any "books." I do not think any one will dispute the statement that the time has come when the Tulare county farmer must change his system and diversify his production. It has been this exclusive wheat raising that has kept our county and other counties that made it a specialty tagging behind southern California.

We do raise here better fruits than they can in southern California; our vegetable products even now, with a Chinaman for a gardener, is more diversified than theirs—by the way, a Chinaman is about as poor a gardener in comparison to an intelligent white man as you can find—so there must be something wrong with our system.

Speaking of gardening, I suppose it is safe to say that each and every family in town uses an average daily of twenty-five cents worth of vegetables and fruits. Now, any fairly industrious young man can, by his own labor, produce enough to supply twelve families with these necessary products every day, and that will be \$3 per day—better wages than the average mechanic earns, because his work is not steady, nor can he make it so, while in our long season the gardening business goes on all the year.

The year 1895 finds the condition of rural life away in advance of what it was twenty years ago. There need be no long experimentation now about crops: the experimental stations established throughout our country are doing all that work for us. The entomologists of our colleges help us to overcome the destructive insects, and newspapers are within the reach of every one and they are great disseminators of information. Farming life now is a gentleman's life, but the farmer must know now more than he used to. Inherited farming knowledge is not altogether the best. Scientific knowledge, in connection with the practical—that is what is needed. I believe that a farmer ought to be a specialist to a great extent outside of the first importance—raising enough for himself and family to eat.

### What a Woman Can Do on a Farm.

By MRS. JAMES STEWART at the Tulare Farmers' Institute.

I have been requested to make a few remarks on what women can do on a farm. In the first place, I would ask: What is there that a woman cannot do with the aid of a good farm hand, for, of course, no woman is able to do unaided all the work required to carry on a ranch? She can direct and look after the work, but to make a success of this business there should be a desire to live on a ranch, and next a determined purpose to make it a lovely place, a happy home and a prosperous enterprise, which is as difficult to do as it is to build up any other paying business.

I know of no better way to illustrate my subject than by telling you of a family who did make a success of ranching. Some fourteen years ago there came to Tulare county a family consisting of a man, his wife and three children, the eldest a boy of ten years and the youngest a girl of three. Their means were limited, and the dry ranch and a modest three-room house, two horses, a wagon and one cow was their stock in trade. There were no improvements other than the house. The husband was compelled to go from home and work to support the ranch, as he expressed it. The wife remained at home with the children. The thought came to her: Shall I do without my cow because there is no pasture fenced, without chickens for lack of hen houses, and fold my hands and let my husband do all the work? No, that will never do, for the taxes and improvements about the ranch will take the most of his salary for the first year at any rate.

This woman, with the aid of her ten-year-old son, constructed a small chicken house and coops for young chickens, bought four dozen hens, a few ducks and turkeys and commenced the poultry business, and I can truly say there were no idle moments for that farmer woman, for, between looking after her family and taking care of the fowls, she was very busy indeed. The eldest son hauled the wood and did all such work and helped make a small pasture for the cow, while the horses were tethered on the plains. The husband, while home resting, put up a home-made windmill which furnished water for the stock and a small garden, which she and the children cultivated.

I may say right here that children can help do the work, from the youngest to the eldest, for this lady told me that her youngest child did a great deal of the tending of the little chicks, such as taking food and water to them, letting them out on the grass and driving away the greedy old hens from their food, thus saving the mother many steps, at the same time giving them their first lesson in industry.

At the end of the first year they had things in such a shape that it was not quite so hard a struggle.



The second year they were enabled to make some needed improvements, bought three cows, put in twelve acres of wheat for hay and chicken feed, enlarged the poultry yards, hired the hard work done and superintended it herself.

From the profits of the cows and poultry the third year they were enabled to fence with posts and two wires the entire 160 acres. This was accomplished independent of her husband's salary. After the fifth year the stock had so increased, and there was such an accumulation of work and care, that the husband remained at home thereafter, for it requires both a man and woman to run a ranch in Tulare county.

While it is necessary for a man to look sharply after the business, it is just as essential for the woman to keep a watchful eye on the income and outlay and all the expenses of the house; also to try and reduce the running expenses of the ranch by producing as many of the necessities as possible at home.

I will state a few of the things that this lady tells me they produce for the family use: Plenty of golden honey, eggs, young chickens, turkeys for holidays, butter, cream, beef, wheat for flour, fruit, the best of bacon and ham, lard and mutton for summer use. She also packs butter when plentiful for cooking purposes. The surplus is sold or exchanged for such things as the ranch does not yield. She also makes cheese weighing four to five pounds, which is convenient for family use. Their wagon seldom goes to town without something to sell. The old house has given place to a comfortable new one, surrounded by a flower garden and lawn with honeysuckles and roses clambering over the broad porches.

The children have been educated; music and other accomplishments have not been neglected, and it seems to me that this lady's experience will answer the query, What can a woman do on the farm?

## FLORIST AND GARDENER.

### Women as Florists.

By MRS. B. M. ALFORD at the Tulare Farmers' Institute.

I have been requested to contribute a paper to the programme of the Farmers' Institute on the subject, "Women as Florists," the request being supplemented by a list of queries on kindred topics to be answered according to my own experience and observation.

Looking at this from a practical standpoint it seems somewhat surprising in these progressive days—days so full of clamor for equal rights and equal admission to all avenues of enterprise—that this branch of business has been so long relegated almost exclusively to men. It is only within the last ten or twelve years that women have entered a field for which they are exceptionally well fitted by nature—a business requiring traits of character with which they are supposed to be fully equipped—industry, patience, enthusiasm, attention to detail, love of the beautiful, a rudimentary knowledge of botany and good powers of observation. These, coupled with a natural appetite or inclination in that line, are a good foundation for the successful florist.

A very strong argument in favor of this occupation for women is that it can be pursued at home, a very desirable arrangement for the grand majority of workers, who perhaps have no inclination or opportunity to engage in any pursuit that takes them away from home and family. Most women are sufficiently rugged for the ordinary work of floriculture, and especially adapted to the minutiae of classification and nomenclature. The delicate manipulation of seeds, cuttings and all other modes of propagation, and for the most profitable branch of the business, the cut-flower work, which during the last few years has assumed wonderful proportions in large towns and cities.

The work is healthful, invigorating and fascinating. In a table of comparative length of life in different trades and professions we find florists in the list of those who live longest and as their work deals principally with the most beautiful of God's works, the inference is very strong that their lives are happy.

In the columns of the *Florists' Exchange* may be found the advertisements of numerous lady florists, located principally in eastern cities, many of whom send out annual price lists and catalogues and there are many others who make a specialty of a few varieties and find time to cultivate them successfully in the intervals of rest from household cares. A notable instance is Mrs. Anna B. Nickels of Texas, who makes a specialty of cacti and kindred plants, collecting them from the wilds of Texas and from almost inaccessible regions in Mexico. Her fine exhibit at the Columbian fair took valuable prizes. We can refer also with pride to Mrs. Theodosia B. Shepherd of Ventura, who, with poor health and small capital save a love of flowers and a desire for independence, had the courage to plant a garden down by the sea and risk the results. Her business has out-grown the local retail trade and assumed wholesale proportions. Eastern florists buy largely of her and it is an accepted fact that her California seeds, plants and bulbs are among the most reliable

in the market. Health has come also, along with competency, the result of living in the open air and sunshine.

In our own town are women who make flower culture a success and somewhat of a business; Mrs. G. W. Zartman, who makes specialties of roses and chrysanthemums, growing for sale seventy-five varieties of each. She also cultivates violets very successfully and choice bulbs. Mrs. W. Hoyt grows for sale 125 varieties of roses and 100 of chrysanthemums, besides a general assortment of other plants and shrubs. These ladies are busy workers in the world aside from household duties which they perform. They find time to do most of their garden work and keep abreast of the times in the line of floral novelties.

But I was requested to mention the disadvantages that are to be met and overcome in flower culture. There are many enemies to successful cultivation. There are bugs and slugs and grubs, crickets and grasshoppers and scales, frost and sun and wind; in this as in all other pursuits eternal vigilance is the price of success. Want of a market is the chief difficulty in the way of profit, arising somewhat from the established custom of sending to eastern florists for plants and to an apathy or indifference to matters of home adornment too prevalent among the masses. But these things change as civilization moves on, and the willing, enthusiastic toiler finds some recompense in good digestion, refreshing sleep and the infinite gratification of the love of the beautiful.

*Flowers on Alkali.*—In the list of queries was one in regard to alkali soil, its effects on flowers, and best methods to reclaim it. I have found a few things that succeed fairly well in soil of this description. Oleanders and lemon verbena succeeded in strong alkali, while roses perished entirely. Chrysanthemums grow moderately well and a few of the hardy annuals. To reclaim it the ground was repeatedly enriched and mixed with sand. I consider the sand an important factor in improving alkali soil, acting probably by rendering it loose and porous, and so more susceptible to the action of water. By experience I have found that Bermuda grass succeeds admirably in such soil, and I would not undertake the costly and aggravating experiment of reclaiming it for the cultivation of anything else.

How best to root slips was another query. In the absence of propagating houses success is obtainable by planting slips in shallow boxes of damp sand and keeping them damp and warm either by natural or artificial heat.

*Sun and Shade.*—What plants for sun and shade? I have been asked. In our generous soil and summers of sunshine we find ample scope for the cultivation of everybody's favorites—roses, lilies, carnations, dahlias, geraniums, heliotropes, plumbagoes, hardy shrubs and vines, chrysanthemums, hardy perennials and annuals—nearly all of which flower in the sunshine and adorn our gardens almost the entire year. And as they grow and flourish and reach up to the sun, in the grateful shade of their luxuriant foliage the modest daisies, violets and pansies, the graceful fuchsia and begonia and delicate ferns and mosses may be coaxed to grow and bloom. In beds of rocks and sand in the hottest sunshine the cacti of Texas, Arizona and New Mexico find a suitable home and expand their gorgeous blossoms to Tulare sunshine, in close companionship with the entire family of succulents, aloes, crassulas, agaves and others of similar habits. These are only a few from the long list of plants that are easily obtained and cultivated.

Aside from pecuniary considerations we can cheerfully recommend flower culture as healthful and delightful, giving ample opportunity for the exercise of taste and ingenuity, the study of form, color and harmony, and all artistic beauty. Everybody should plant something to beautify the country; and when the unwary easterner, fresh from his icy home, shall breathe the perfume from vine embowered porch or cast his snow blinded eyes on beds of flaming poppies, who knows but he may be constrained to abide with us and build for him and his a home in our fertile valley?

### Ferns and Their Friends.

By this title we do not mean ferns and those who admire and love them, but ferns and other plants which can be well grown near them. Mr. Carl Purdy, the well-known plant lover of Ukiah, Mendocino county, recently prepared a letter on this subject for the Eastern magazine called *Success With Flowers*. His method and success will be suggestive to many readers of the *RURAL*, and we give them in his own words:

My fern bed was a shaded spot on the northwest angle of my house. When I moved in I hardly knew what I could plant to beautify it, when a happy thought struck me. Why not have a fern bed? Fern beds are not common in California gardens, or, indeed, outside of deep and shaded canyons.

Our hot, dry summers are not conducive to the growth of ferns and wood plants. Still, as I had abundance of water for sprinkling, and the place was shaded till after midday, I felt I might make a

success of it. The ground had never been cultivated so I spaded it thoroughly the first summer. The next thing was a soil which the ferns would like. Into a pile in the rear yard I heaped the grass, weeds, sweepings and chips which accumulated, and by early winter the mass had rotted sufficiently to screen. A garden screen is a very useful tool which I could scarcely dispense with. A very good one can be made of such fence netting as is used for chicken pens. The mesh is about an inch across. Stretched on a stout frame, which can be leaned against a support, soil can be quickly screened of gravel and rubbish.

This compost and mixed soil proved to be quite suitable to the needs of the ferns. I spread it on top of the bed, but did not work it in very deep, and then I was ready for my ferns. Our town is situated in a valley in the Coast Range, and the canyons near us gave me quite a choice of ferns. I did not get them all at once, but when in the mountains remembered my fern bed, and secured good plants of such ferns or wood plants as I ran across. Where possible, I lifted my ferns with a mass of earth clinging to the roots. By spring I had enough plants to make my bed fairly full. It took time and experience to learn the prettiest arrangement and best treatment. And now for my variety. My prettiest and most satisfactory plants are the Cham Fern (*Woodwardia radicans*). When once established they have done well. In our woods they grow to seven and eleven feet in height. My own are less than four, but the light green fronds are very pretty. The Aspidium (*A. montanum* var. *nubricans*), or Sword Fern (*A. rigidum* var. *argutum*), and, last of all, the lovely *A. aculeatum*, do very well. Another fine large fern is the Lady Fern (*Asplenium folio femina*), which is thriving. In our woods are two Maiden-hairs. One, the Five Finger (*Adiantum petatum*), is also common in the East. *A. emarginatum* is a much more delicate deciduous sort. With us *A. petatum* is only found in deep, cold canyons or in the redwoods. They have, however, done quite well in my bed. Indeed, this spring some clumps under the shade of the large ferns left little to be desired. Our Gold Ferns do not like frequent sprinklings, as the other varieties mentioned do, still I have a few fine clumps of *Gymnogramme triangularis*. There is a class of ferns here which grow in the clefts of rocks in hot places. These I do not succeed with. I have indeed got plants of *Pellaea andromedifolia* and *Pellaea densa* to live for a while, but they are not a success. I found that my bed needed still more shade on the west and so built a trellis some eight feet high to enclose it. On this trellis are bushes of Cloth of Gold, William Allen Richardson, Reve d'Or, Reine Marie Henrietta and Reine Olga de Wurtemberg roses, which thrive admirably. All of the roses would do well, but the Cloth of Gold would, with my permission, cover the entire trellis. It had over 600 roses for its first crop this season. The rose sprays go far above the trellis and droop outward, giving a very effective shade, and can, if best, be trained overhead.

*Other Plants with Ferns.*—With my ferns I have planted a variety of other plants, some cultivated but more wild. *Heuchera micrantha*, *Tellima grandiflora*, *Boykinia occidentalis* and other Saxifragas mingle admirably with the fern fronds. Last spring I had a large section of the bed carpeted with *Saxifraga Mertensiana*, a delicate sort with round leaves and pretty white flowers. *Sedums* here and there make a dainty carpet. I have several native violets naturalized. At one side is a large mass of *Iris Douglasiana*, a native grassy sort with fine white flowers, and have some plants of our purple sorts naturalized now. A bed of our Lady Slipper (*Cypripedium montanum*) has become well established, blooming freely, and are greatly admired. A little later *Epipactis gigantea*, another rather pretty orchid, has a large clump and blooms very full. A prized member of the group is our wild Sweetbrier, a dainty little rose about a foot high. A pet which has not done so well is *Rhododendron occidentale* which stood still for several years, but is now growing well. A plant of the Florida Calycanthus is growing vigorously, and is very pretty. Another pretty plant is our *Yerba Buena*, a pretty trailer, which I hope will soon cover the ground in places.

Lilies of some sorts find a congenial home among the ferns. *L. Parlatinum* and *L. Maritimum* are well established, and bloomed grandly, but *L. auratum* never has thrived. Two of the prettiest effects with the ferns were made by our scarlet Larkspur (*Delphinium nudicaule*) and our Columbine (*Aquilegia truncata*). Their foliage is pretty, and the ferns set off the bright flowers finely.

Moisture is supplied by one of the rotary sprinklers, and I find that a soaking twice a week does very well, although a daily sprinkle keeps it fresher. Last spring this bed was the prettiest feature of my yard, and a glimpse of it was like a breath of nature. I have thought to throw in a small rock work, but still the bed is very satisfactory as it is, and one that is a daily pleasure to visit. I find that a dressing of half-rotten leaves in the fall suits my plants well, holds moisture and saves watering. It is wonderful what a variety of plants can be grown in so small a space, and I am delighted with the experiment, which most California readers could readily imitate.



## THE HOME CIRCLE.

## The Other One.

Sweet little maid with winsome eyes  
That laugh all day through the tangled hair,  
Gazing with baby looks so wise  
Over the arm of the oaken chair,  
Dearer than you is none to me,  
Dearer than you there can be none;  
Since in your laughing face I see  
Eyes that tell of another one.

Here where the firelight softly glows,  
Sheltered and safe and snug and warm,  
What to you is the wind that blows,  
Driving the sleet of the winter storm?  
Round your head the ruddy light  
Glints on the gold from your tresses  
spun,  
But deep is the drifting snow to-night  
Over the head of the other one.

Hold me close as you sagely stand,  
Watching the dying embers shine;  
Then shall I feel another hand  
That nestled once in this hand of mine;  
Poor little hand, so cold and chill,  
Shut from the light of stars and sun,  
Clasping the withered roses still  
That hide the face of the sleeping one.

Laugh, little maid, while laugh you may,  
Sorrow comes to us all, I know;  
Better perhaps for her to stay  
Under the drifting robe of snow.  
Sing while you may your baby songs,  
Sing till your baby songs are done;  
But oh, the ache of the heart that longs  
Night and day for the other one!

—Harry Thurston Peck.

## Luck of the Atkinses.

Nobody ever was poorer than the Atkinses, or, in common parlance, any more "shiftless." The family consisted of the old man, Bill by name, a half-blind, decrepit creature, who yet possessed a share of quaint humor; his wife, Lou-i-sy, a lazy, ragged old woman, who had grown fat on nothing and who managed to keep her snuff-box full even when the coffee-pot was empty, and five or six lank, sallow boys and girls in various stages of age and dirtiness. They occupied a small log house on the outskirts of a town in the mountains of Arkansas, and their dwelling was remarkable only for its simplicity. It consisted of a single room which the entire family occupied without regard to age or sex; the fireplace furnished at once heat, light and the means of cooking their scanty food. Three wretched beds, a broken chair or two, a box which served as a table, a frying pan, spider and coffee pot, with a few broken dishes, comprised the entire wealth of the Atkins family, for their house was the property of a well-to-do citizen who let them live there for very pity. It was quite prosperous, this inland Arkansas town, though fifty rough and rocky miles from the nearest railroad; it was considered by the country folk around a dashing, stylish place. The ladies there never went barefooted, even in the hottest weather, and sunbonnets were long since out of date. The men, too, wore store clothes, and some of them wore their coats to meeting during the summer; but this innovation was by no means popular. It was a gossip little community, as an isolated place must be, and its church and political factions managed to keep things from stagnating. But the whole town was united upon one thing—in heartily condemning the Atkinses. Even the Methodists and Campbellites agreed on that, and they did not often agree upon anything, for the Campbellites had affirmed that they could sing louder and faster than the Methodists, and the boast had caused considerable ill feeling.

The town had to support the Atkinses, so surely it had the right to disapprove of them, but the disapproval was rather out of proportion to the aid they furnished, and, had the position been reversed, the Atkinses would have had more to eat. One lady in the town had declared that she would never help them Atkinses again. She related to a circle of sympathizing friends that she had offered Mrs. Atkins two bits a week and all she could eat if she would do her washing and cooking, but the offer had been refused. Mrs. Atkins said she had to stay at home and take

care of her "man," as he was "mighty nigh blind," and the old man had jocosely remarked that he "lowed Lou-i-sy'd been doin' nothin' so long she'd hate to quit."

Mr. Johnson was proprietor of the only grocery store in the town. He had come from New England years before, and had opened this store when lemons and oranges were practically unknown and white sugar well nigh as hard to obtain. By dint of keeping these and similar luxuries and selling them at astonishingly high rates, and by introducing into the western market many high-priced novelties, such as sardines, canned fruits, oatmeal, ABC crackers, and other articles calculated to please the eye and palate of the village customer, he had managed to amass quite a tidy little sum. On this gentleman the burden of contributing to the support of the Atkinses fell with especial severity. Not that he gave more than any one else—quite the contrary—but that his well-known stinginess made him feel it more. It is doubtful if he would have given anything at all, but from his desire to stand well in the eyes of the community, and especially of the gentleman on whose land the Atkinses lived. He was the rich man of the town, and his influence and importance were wonderful in a small way.

One evening a group of men had gathered in Mr. Johnson's store, as was the custom, solemnly gossiping about the events of the day. The proprietor stood behind the counter keeping an anxious eye on his boxes of crackers and fruit that stood invitingly open. He was a slender man, slightly stooped, with his face and upper lip shaven and an iron-gray beard adorning his chin. He had small eyes and a bland smile that was intended to be very pleasing. It was hard to keep the smile this evening, though, for a lank mountaineer was making fearful depredations upon a box of "animal crackers" that stood open on the counter. He dared not stop the man, for he was a possible customer, but as he saw his pastry cows and elephants disappearing his heart sank within him. It was not until he had safely maneuvered the box out of the man's reach that he was able to give his attention to the chat that was going on.

Abe Lewis had the floor, and he was telling something that was truly astounding. "Have you fellows heard that ole Bill Atkins is going to draw some money soon?" he asked. The sensation the news produced was full up to the speaker's expectations. "Yes that man that was here awhile back looking out for pensions is goin' to git a pension fer Bill," he continued. "You all know Bill fit in the war, an' he's blind, you know, an' he's goin' to git his money now soon. I reckon his back pay'll be sev'ul thousand dollars. It'll be two or three months before he'll git it, but they say it's sure to come." Well, well! would wonders never cease! Bill Atkins a moneyed man! The news must be true, for the whole party remembered the pension examiner who had visited the town, and two or three men testified to seeing him go to Atkins' house.

The news spread like wildfire through the little town, and created a variety of emotions. A few skeptical souls pretended not to believe it, but they were in a hopeless minority, and the subject was discussed in all its bearings. The Atkinses had suddenly, and by no effort of their own, become very important citizens. Mrs. Smith, the wife of one of the ministers, told the ladies in the sewing society that she thought it a shame that none of them ever went to see the Atkinses. "They've got souls to save if they air pore," she added, judiciously overlooking the fact that report said they were no longer beggars. Mrs. Kelly, the lady who had avowed her intention of never helping them again, looked quite abashed, and secretly resolved to send Mrs. Atkins a pitcher of butter-milk.

Next morning Mrs. Atkins herself set forth for a visit to Johnson's store, entirely unaware of the rumor that was abroad. She entered the place

rather timidly and in a very apologetic tone asked for a pound of bacon, a little coffee and a box of snuff, adding, as was her invariable rule, that she would pay for the things as soon as "berries gits ripe." As Mrs. Atkins had made this same promise every time she had entered the store, there was no reason why it should have particularly impressed Mr. Johnson; yet he seemed delighted and hastily produced the things she wished, but in much more generous quantities. "How would you like a nice ham?" he asked, holding up the article in question. Mrs. Atkins hesitated. She was as honest as her limited means would permit, so she shook her head, saying he would get tired of waiting for his pay. "No, indeed," he insisted; "take your own time to pay for it. I don't mind waiting a bit on a good customer." Thus urged, Mrs. Atkins took the ham, and added several unaccustomed luxuries to her list. He would not allow her to carry the things, but sent them in his delivery wagon, and gave her at parting a polite "call again." Mrs. Atkins went home in a truly astounded state of mind, related her remarkable adventure to the old man and the children, and wound up by declaring that "Jim Johnson's been converted, and I know it, else he never would have did it." The Atkinses enjoyed a square meal that morning—the first in many a weary day.

The two churches—there were only two in the town—seemed to vie with each other in paying delicate attentions to the hitherto neglected family. To be just, the two ministers and their wives had endeavored to induce the Atkinses to "join the church," but their efforts had not been crowned with success largely, it seemed, because Mrs. Atkins and Mandy, the oldest girl, had "nothin' to wear." But now the other ladies of the church developed a sudden interest in the matter, and, upon receiving the usual reply, one of them boldly asked: "Well, why don't you git a dress at Boothby's? He'll wait till you git the money." Mrs. Atkins, who was getting a little accustomed to her unexpected turn of good luck, plucked up heart to go to Boothby's, the largest "dry goods and general merchandise" store in the place, and, though somewhat uncertain of her expedition, managed to express a desire for a certain purple calico toward which her heart had inclined, but which she had never dreamed of possessing. Mr. Boothby was most affable. Certainly she could have the goods and anything else she wished. A pink calico for Mandy was added, and the enterprising merchant succeeded in pressing upon the bewildered woman various articles of adornment entirely unsuitable to her, but of which he had found some trouble in disposing.

Thus it went on. Mandy and her mother became regular church-goers, arrayed in their elegant new calicoes, and even the old man had a new suit of "store clothes" sold him on time and somewhat against his will by an accommodating merchant of the town.

In vain the Atkinses protested that they did not know when they could pay for all these luxuries; these generous friends smilingly waved aside all such scruples and protested that they were perfectly willing to wait.

Thus the winter passed, the Atkinses daily growing in favor. It had been a hard season, but, thanks to the indulgence of their now numerous friends, they fared well, and the oldest boy had a position that enabled him to earn a little.

Spring came, and with it the pension officer came to the town again. He stopped at Johnson's store one day to purchase some cigars, and that smiling merchant took occasion to question him a little. "When is ole Bill Atkins goin' to get his pension?" he asked.

"Atkins—Bill Atkins? I don't remember any one of that name. Oh, yes, you mean that old half-blinded fellow that lives at the end of the town. Why, he won't have any pension at all. He applied, and I examined the case when I was here, before. His blindness has nothing to do with his

war service. There is no reason in the world why he should have a pension. He has known ever since I was here last fall that he wouldn't be allowed anything."

So saying, the pension-man paid for his cigars and strolled out of the store. But the silver lay unnoticed on the counter. Mr. Johnson stood with his mouth wide open and his eyes staring at vacancy.—Lippincott's Magazine.

## Papering the House.

Bedrooms should be papered or painted in medium tones of color, neither light enough to make a glare in summer, nor dark enough to absorb the pale gleams of winter, says a writer in the Philadelphia *Public Ledger*.

For a summer room let us take a hint from the cool, old-fashioned parlor, whose closed blinds and dark walls were a refuge for the eye and mind after the bright whitewashed kitchen.

A decided pattern in the paper is sometimes necessary to increase the size of a room. Fine vertical lines do this, whereas any large detached patterns have the opposite effect.

Blue walls, or those with blue lights in the color, make a room seem large, as blue recedes from the eye. This color must be skillfully used, however, for if too pale it is cold and unsympathetic; if crude, it takes all color from the complexion of the mistress. The shades of blue that wear the best on the nerves and senses are toned with gray, yellow or pink.

Do not forget, in the country house, that the green on the lawn and in the foliage will play strange tricks with reflections, and sometimes apparently change the entire color scheme of a room.

Grayish tones of red and pink are cool and restful, but beware of orange, save in a little dark den of a winter house.

When rooms communicate the colors should harmonize in contrast—red with green, orange with blue, purple with yellow was the old law of complementary colors, but now the rule is "put any colors together which have the same amount of some other neutralizing color in both," a gray-green and a gray-blue, for instance. But the best effects are obtained where both laws are followed with modifications, as when the red and green is changed to shrimp pink and gray-blue green.

The floors should always be darker, the ceilings lighter, than the wall, and as the most important part of decoration is the consideration of harmony, rather than color, the furniture and hangings should be carefully chosen. If, as is most often the case, the furniture has already been in use, choose new paper to harmonize with that, and not for its own beauty of color design. Fresh walls, soft-colored rugs and an unseamed, unobtrusive ceiling make any room attractive. In spite of the prejudice against any one daring to have a taste of his own, it is well to remember that the decorator—be he ever so scientific or artistic—does not live in the midst of his "creations," and that a room which at first glance may seem chic or ravishing may, after

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a summer's acquaintance, prove a tiresome, unrestful bore.

Avoid the design which makes fifty different patterns—diamonds, squares, hexagons, interlacing circles and the like—or one where the repeat is so carefully hidden that to follow is distraction, yet an imperative necessity.

### Popular Science.

The fiber of the coarsest wool is about the five hundredth part of an inch in diameter.

Human hair varies in thickness from two hundred and fiftieth to the six hundredth part of an inch.

THE new photograph of the heavens, now being prepared by London, Berlin and Parisian astronomers, shows 68,000,000 stars.

Woods, the naturalist, says that when young spiders first begin to spin four hundred of their threads are not equal in size to one of the full-grown insects.

The wings of an owl are lined with a soft down that enables the bird to fly without making the slightest sound, a very important matter to a nocturnal bird of prey.

It is suggested that sounds too high for our ears would be recorded by the phonograph, and might be made audible by reproducing at a lower speed of the instrument.

The sting of a bee, when compared with the point of a fine needle, under a powerful microscope, is hardly discernible. The point of the needle appears to be about an inch in diameter.

The following method of preserving the colors of dried flowers, applicable to even the most delicate poppies, has been discovered by Herr Nienhaus. Ammonia in the air is the main cause of flowers losing their tints; so Herr Nienhaus presses his specimens between paper which has been previously saturated with a solution of one per cent. of oxalic acid in water.

For the past forty or fifty years the geographers and astronomers have suspected that, on account of a "tilting" in the earth's axis, the latitude of all places on the earth's surface is gradually changing. A few years ago (1892) the astronomers decided to make a "test case" of the matter, and now report that the theory is correct. For example, they have proven that Berlin was fifty-one feet nearer the pole in September, 1892, than it was in March of the same year. If Peary and Wellman will only be patient, the pole will come to them.

"THEY had an original and effective way of preventing strikes on the Sonora Railroad while it was building," says its first superintendent. "The Mexican peons were queer laborers to deal with, and there were habitual kickers and agitators among them to stir up discontent, like those we find in other more enlightened regions where great works are carried on. The Mexican Government, standing as a backer of the road, was, of course, interested that nothing should interfere with its progress, and so when it was discovered that a man was stirring up trouble among his fellow-laborers, he was disposed of in a way peculiar to the country. Some men were detailed to get him drunk—no difficult task when liquor was furnished free—and he would wake up in the morning to find himself in military barracks, and to be informed that he was an enlisted soldier in the army. All the formalities had duly been gone through with, and he was kept in seclusion in the barracks until he was transferred to some remote part of the Republic. He was enlisted under an assumed name, so that when his friends came to the barracks to inquire after him by name, they were informed that there was no such man here. If they doubted the statement here were the rolls which they might inspect. As the Mexican soldier is virtually a prisoner, and the army is made up to a considerable extent of criminals pardoned under condition of enlistment, no comment would be excited by the keeping a new recruit in confine-

ment, and, off in Yucatan or Tabasco, his friend would not hear of him again, at least during the building of the road."

### Curious Facts.

The black ostrich stands seven feet high. The speed is that of a horse, and it can carry a man. The cassowary is as large, but has a shorter neck, and feeds on vegetables.

It is said when the United States Government moved to Washington in the year 1800 the property was all carried in seven boxes, while the Chief Executive got lost in the woods in the neighborhood of Washington.

The two most widely separated post-offices in the United States are those in Key West, Florida, and in Ounalaska, Alaska, 6271 miles apart. Two cents will insure the carriage of a letter between those distant points.

It is said that singers, actors and public speakers find that since the introduction of the electric light they have less trouble with their voices, they are less likely to catch cold, their throats are not so parched and they feel better. This is due to the air being less vitiated and the temperature being more even.

The longest dry-dock in the world is now building at Glasgow, Scotland. It will be 900 feet over all, 800 feet from inside face of caisson, 74 feet in width at bottom and 115 feet at top, and 28 feet deep from average high-water springs to floor. The entrance is to be 83 feet wide, with perpendicular sides, and to have a depth of 26 feet from average high-water springs to sill.

They do not think anything of an egg in China, it seems, until it is about one hundred years of age, old eggs being worth as much in that country as old wine is elsewhere. They have a way of burying the eggs, and it takes about thirty days to render a pickled egg fit to eat. Some of the old eggs have become as black as ink, and one of the favorite Chinese dishes for invalids is made up of eggs, which are preserved in jars of red clay and salt water, consequently there is not much pleasure in being an invalid in China until you have had plenty of training.

### Fashion Notes.

Little gowns of dimity are made with blouse waists and puffed sleeves, and cut out in the neck, which is trimmed round with three ruffles of embroidery overlapping each other.

Lawn and gingham dresses are made like those of pique, excepting that the waist is slightly full on to a thin lining and cut out square in the neck, to be worn over a white guimpe. Tiny rosettes and ends of satin ribbon are a pretty addition to the lawn dresses made in this way.

Shirred hats for very small girls have a tiny ruche underneath the brim in front, and tie under the chin with hemmed strings of Swiss. Sun bonnets have wide full frills of Swiss edged with lace, or embroidery if the bonnet is of pique, around the face, tapering down narrow at the chin, and double, full, straight capes at the back. Loops of half-inch gauze ribbons in pale pink and blue are the outside decoration.

A charming little yellow pique gown for a girl of ten has a plain empire waist with a yoke of tucked nainsook, with a band of white embroidery across the lower edge and a belt of the same insertion. Over the puffed sleeves are shoulder frills of pique trimmed round with an embroidered edging. With this is worn a large yellow pique hat made with a corded brim with a ruffle of white embroidery on the edge and a large flat crown.

Swiss firms have entered into a contract with the Japanese war office to supply a sufficient number of watches for one to be given to every soldier who has served in the campaign when the Mikado reviews his victorious troops at the close of the war. The watches, which will take the place of war medals, are to cost \$1.50 apiece

### Gems of Thought.

The knowledge of things alone gives a value to our reasonings, and preference of one man's knowledge over another's.—Locke.

Nothing is so great an enemy to tranquillity and a contented spirit as the amazement and confusions of unreadiness and inconsideration.—Jeremy Taylor.

It cannot but be injurious to the human mind never to be called into effort. The habit of receiving pleasure without any exertion of thought, by the excitement of curiosity and sensibility, may be justly ranked among the worst effects of habitual novel reading. Like idle morning visitors, the brisk and breathless periods hurry in and hurry off in quick and profitless succession; each, indeed, for the moment of its stay prevents the pain of vacancy, while it indulges the love of sloth; but altogether they leave the mistress of the house—the soul, I mean—flat and exhausted, incapable of attending to her own concerns, and unfitted for the conversation of more rational guests.—Coleridge.

The groves were God's first temples,  
Ere man learned  
To hew the shaft, and lay the architrave,  
And spread the roof above them—ere he framed  
The lofty vault to gather and roll back  
The sound of anthems, in the darkling wood,  
Amidst the cool and silence he knelt down  
And offered to the Mightiest solemn thanks  
And supplications. —Bryant.

A tree is an under-ground creature, with its tail in the air. All its intelligence is in its roots.—O. W. Holmes.

A certain amount of distrust is wholesome, but not so much of others as of ourselves. Neither vanity nor conceit can exist in the same atmosphere with it.—Mme. Neckar.

### Smiles.

"De man wif er fightin' nature," said Uncle Eben, "orter be kyahful how he handles his own weapons. Hit am pow'ful hah'd ter sympathize wif er bee dat's stung by its own stinger."—Washington Star.

Houser—"Why do you suppose justice is always represented as a woman?" Mrs. Houser—"Because she never gets her work done."—Philadelphia Inquirer.

Buggins—"Why all this talk about the new woman?" Muggins—"I suppose because it isn't safe to refer to any woman as 'the old woman.'"—Philadelphia Record.

First-born (with English instincts)—"I want to go abroad, father, the 1st of April and see the world." Wise Parent—"No objection to your seeing the world, but I do object to the world seeing you."—Harlem Life.

Little Boy: "How old are you?" Miss Antique (confusedly): "You should not ask a lady how old she is."

Little Boy: "Oh, 'xcuse me. How young are you?"—Good News.

Smart: "Whatever induced your uncle to marry the widow of a man who was hanged?"

Simpson: "He has been married to widows before and said he was tired of having the virtues of former husbands flung in his face."

ONE of the paradoxical things about people is that they always think times will be better if prices are high, and yet every mother's son and daughter laments bitterly whenever that prayed for advance results in their getting less for their dollar than they got before. They do not seem to be quite sure whether it is prices or things they want in this life. A little study in eco-

nomics would show them that the ideal condition to be sought is that in which they will get the most things with the least effort. The progress of wages is not alone in increasing the number of dollars, but in enhancing the purchasing power of the dollars they get now.

## DOMESTIC ECONOMY.

### Hints to Housekeepers.

Vinegar and sugar will make a good stove polish.

Grease may be removed from woolen goods by sponging it with strong cold coffee.

Wear old loose kid gloves when ironing as they will save many callous spots on one's hands.

Fine laces may be cleaned by being packed in wheat flour and allowed to remain twenty-four hours.

It is a good plan to burn pine tar occasionally in a sick room, as it is an excellent disinfectant, and it also induces sleep.

If a shirt bosom or any other article has been scorched in ironing lay it where the bright sunshine will fall directly upon it.

It is well to keep a small paint brush convenient for dusting the crevices in furniture, and all spots that cannot be reached with the dust cloth.

If sheets or tablecloths are wrung by putting the selvage through the wringer, the edges will not curl up, and they will iron much easier.

When anything has been spilled on the stove, or milk has boiled over and a suffocating smoke arises, sprinkle the spot with salt and it will quickly disappear.

Perspiration stains may be removed from the sleeves of white woolen or silk dresses by sponging with warm water, into which ammonia has been poured, and then with clean water. Press the place before it becomes quite dry.

The teeth should be brushed up and down, rather than across from one tooth to another, as the particles to be removed are generally between the teeth. Remember also that the insides and tops of the teeth need brushing as much as the outside.

To make a sand bag to use in the place of a hot-water bag: Make a square bag of heavy linen or firm cotton and fill it with silver sand. A bag of sand retains the heat much longer than water or a brick and is preferred by some persons. Like a hot-water bag, a sand bag may be fitted into place, so that it is more comfortable than a brick or soapstone. It requires several hours to heat a bag of sand in an oven.

It is important to remove tar, wheel grease, etc., from wash goods before placing in the suds, and soap should not be rubbed first on any stain, as it will tend to set it. To remove the tar or grease from white goods rub with oil of turpentine and soap, alternating with streams of water. For colored cotton and woolen goods, rub lard thoroughly into the spot, and let it lie until the tar seems loosened, then treat alternately with oil of turpentine, soap and water. Silks may be treated carefully in the same manner, using benzine instead of oil of turpentine.

THE official population of the city of New York was stated to be 1,984,866 on the 1st inst.

A PHILADELPHIA COMPANY is making paving blocks of compressed hay.

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**Royal Baking Powder**  
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## Patrons of Husbandry.

### The Grange Field.

The Inspection work which has been in progress during the past two months is nearing its close. It has been pursued with both devotion and energy, and has cost a good deal of money. All the accounts have not yet been passed upon, but we are told that, first and last, it will use up the larger part of the lecture fund, which has been so long and carefully hoarded. The several subordinate Granges appear to have had a good stirring-up, and now the question arises, How is this stirring-up to be put to permanent account? If nothing further is done, if the work of the inspector began and ended with his official visit, the money spent will simply have been wasted. But this must not be; the Inspection must be followed by something that will maintain and increase the interest which appears to have been aroused during the past few weeks. What this is to be will largely depend upon the spirit which prevails among the subordinate Granges. If the Inspection has done them any good, it ought very soon to manifest itself in an increase of Grange interest, in expansion of membership and the institution of new Granges. But while the work must thus be done in the subordinate Granges, it must have leadership, and this the Executive Committee ought to supply.

There ought now to be put into the field an active revivalist and organizer, commissioned to go from Grange to Grange, not as an inspector, but as a suggester and starter of new projects. In the course of his work he would, in the very nature of things, discover facts and devise methods which would interest all the Granges in the jurisdiction. He should be a man capable of writing each week to the *RURAL* Press and other journals circulating in rural communities a rattling letter, full of Grange interest. It was this sort of thing that the editor of the *RURAL* had in mind when, in the "revival meeting" held in San Francisco last November, he made the motion which finally took form in the Inspection work. He still believes it to be the very best practicable way to stimulate Grange interest, and he believes it to be just as necessary now as it was four months ago. If something like this is not done; if the work of the Inspector be not supplemented by further effort, then it will yield little permanent good and the Grange savings will have been spent to no real purpose.

We are not informed as to what San Jose proposes to do in the matter of the projected Summer meeting proposed by Highland Grange. The Highland folks have invited them to take the lead and a committee has been considering the matter. If they have come to any determination we have yet to learn of it. If San Jose decides to carry out the plan, well and good; but if it does not then the Executive Committee should take hold of it. A Summer meeting upon the terms suggested by the Highland people would be a novelty in California, and it would, unquestionably, attract a very large attendance. Already it has excited wide interest in Grange circles; and it should not be allowed to drop. Some-

thing like the Highland plan has long been practiced in Pennsylvania—a fact which has, possibly, some relationship to the unexampled prosperity of the Grange in that State. While the Highland people, as the proposers of the project, are entitled to be first heard from in the matter, there is no obligation to go there. If the members of the Order—like Mr. Ohleyer—prefer the ocean side or any other place, then let the meeting be held at that other place. But by all means let it be held somewhere. Let there be an occasion which will make it worth while for Patrons to come together; let there be an event which will declare to the people of California in unmistakable terms that the Grange is alive and in the field as a leader in the work of education and all the blessings associated with it and with social life.—A. H.

### Volunteered from Yuba City.

TO THE EDITOR:—For some good reason our Worthy Lecturer, Miss Maud Green, was not present at our meeting last Saturday, and since the clever lady is also our Grange reporter for the year, Brother Ohleyer having been excused at his own request, I beg a little space as a volunteer in her behalf and also in behalf of the Grange, which had a more than usually interesting session on Saturday.

After the routine business had been transacted, Bro. B. F. Walton informed the members that at the April meeting of the State Horticultural Society, held recently in San Francisco, it was resolved to hold a series of meetings among the fruit-growers instead of in the cities, as had heretofore been the habit. He said the idea met with prompt approval, and on his naming the Yuba City district as offering a good starting point the invitation was at once accepted and the society's next meeting will be held in Yuba City on Friday, May 31st, convening at 10 A. M., and, with the exception of a noon hour, will hold an all-day session. The speaker stated that the Yuba City had become quite famous abroad for the variety and quality of its fruits, and that there was a universal desire expressed to see and learn for themselves what our community had to offer to warrant the attraction it is enjoying. This announcement created much enthusiasm in the meeting, explainable by the fact that nearly all present were more or less directly interested in fruit-growing. Mr. Walton stated that the local association of fruit-growers was much elated over the distinction accorded this locality, and had already appointed committees to make necessary arrangements, in which they were being joined by Butte and other associations and by enthusiastic individuals, all determined to make the occasion one of pleasure and profit. He suggested that it would be a timely act for the Grange also to appoint a committee to assist in carrying out the details of the convention, and on motion the Worthy Master appointed Brothers Walton, Frisbie and Harter, and Sisters Joie Walton and Jennie Starr.

The matter of a Grange picnic was then considered and by unanimous vote it was ordered that one be had, the time and place to be determined by a committee of three to be appointed by the chair, who immediately appointed Glenn Harter, Lon Grafis and Mrs. B. F. Walton as such committee. An evening entertainment is to be had at the hall after the picnic, which is to be planned by the following committee: Brothers Ed. Starr, George Ohleyer Jr., F. Carlson, and Sisters Dora Kells, Nellie Brophy and Annie Cooper.

A suggestion was made and received with general favor, that a County Fair be held in the fall under the auspices of the Patrons of Husbandry, and which, owing to the lateness of the hour, was deferred for consideration until the next meeting. It is a safe prediction

that such a fair will be held and will be a success.

Brother E. C. Shoemaker, Master of Tulare Grange, being present, on invitation addressed the meeting in his best style, receiving the hearty plaudits of his hearers. Other members of the Grange had their little say, and several of the sisters rendered sweet music on the piano.

Now, if the appointed scribe will pardon this trespass on her rights, I will hie myself behind the shades of

VOLUNTEER.

Yuba City, May 6, 1895.

### Of Interest to Grangers.

TO THE EDITOR:—I have been an interested reader of the articles, and especially the one by Mr. Adams in the last *RURAL*, referring to the proposed outing by Patrons of Husbandry in the Santa Cruz mountains. Such enterprises are to be commended, but, judging from the article, the locality is too inaccessible to suit the great majority.

But why climb the mountain when the very best accommodations can be had at Camp Capitola, or a dozen other places bordering on salt water, and where daily trains render them easily and cheaply accessible? Ours is a State of "magnificent distances," so, while the project is feasible for the Bay country, but few from the great interior valleys could avail themselves of the pleasures offered by an outing in those mountains. The locality being four miles from a railroad station is, to my mind, a very serious drawback to the successful working of the scheme. If I may be allowed a suggestion, it would be to go to Pacific Grove as a starter, where every convenience is already established and all supplies can be had at moderate figures.

What the interior resident wants, if he is able to take a vacation in summer, is the cool sea breezes rather than mountain air.

After all, to make the movement popular, such outings, like the gospel, should be carried as near to the common people as possible, for these require the mental food to be distributed more than do those who can ride in chaises to mountain summits. But make the beginning, ye fortunate dwellers of California's garden, and we of the interior will look on from a distance until times improve.

In describing the country from Marysville northward for a hundred miles toward the head of the great valley, published in last week's *RURAL*, let me not be understood that that is all of the Sacramento valley.

The Butte mountains of Sutter county, located nearly midway in the Sacramento valley from every point, form a division between the upper and the lower valley, the lower being of equal length and of greater breadth and of unexcelled fertility, and is the most thickly inhabited of the two great interior valleys. It has double the railroad and navigation facilities over the extremes of either the valleys of the north or south. But, being already well known, I had no intention of describing it except to do it justice in comparison to the upper half.

A few days since a dispatch in the California press from Minnesota read as follows:

The indications at present are that the wheat output of Minnesota this year will be short about 10,000,000 bushels. This will result from the fact that the soil will be put by farmers to other uses. Probably 800,000 acres of wheat land will not be seeded.

Here is a cure for the glut; and, whether the above is true or not, it will become a positive fact in the near future. Wheat growers may well be encouraged, yet they should not depend on a single industry.

The writer is under great obligations to Bro. Shoemaker for reporting the meeting of South Sutter Grange for me. It was a great disappointment not being able to attend in person, as I had been building up for two months for the event. Rain and rheumatism bade me remain under shelter. They needed me, I think, to expose the

alliance, in your columns, of the Master and Overseer. Talk about the trusts and combines in the business world, the evil effects of which our Order was specially instituted to eliminate, and here we have the leading officers of a subordinate Grange forming a trust that only the Almighty may sever.

I believe it the only instance known in Grange history where the two highest officers combined against all the world. Nevertheless the young couple are deserving of the choicest blessings in this and the coming stage of existence. I envy Bro. Shoemaker's merry visit, and will have my own when circumstances are more propitious.

The growing crops of every sort are doing splendidly in all this region round about, and the people are shaping their minds to forget the dullness of the past.

GEORGE OHLEYER.

Yuba City, May 5, 1895.

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You have a chance to rent to a man who has been a store-keeper; to another who has been a stock buyer; to one who has been farming for five years, and to another who has been farming for twenty years. Other things being equal the "twenty year" man would get your farm. Greater experience—that's the reason.

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## ARBORICULTURE.

## Avenue Trees With Striking Bloom.

Mr. C. H. Shinn, of the Agricultural Department of the State University, has an article on trees in a recent issue of the *Call*. He especially mentions two desirable trees, as follows:

In the very first rank stands the *Liriodendron tulipifera*, the great tulip tree of the Atlantic and Southern States. In many districts this is almost a swamp tree, but it will grow in dry localities if there is lime in the soil. It is one of the largest and most valuable trees of the Atlantic forests, and reaches its greatest development in the lower part of the Wabash valley and in the mountains of Tennessee and North Carolina. The wood is largely manufactured into lumber and used for interior finishing and many domestic purposes. For this reason alone the tree should be planted on a large scale in California; but we are now considering chiefly its value for ornamental planting, and more particularly for avenues.

The *Liriodendron* belongs to the showy family of magnolias, all of which are natives of Asia and America, and eminently adapted to arborescence. It is difficult to say why *Magnolia grandiflora* should be so much more often planted in California than its lovely relative, the *Liriodendron*. Magnificent as is a fine specimen of the superb white-flowered Southern magnolia, the trees are brittle, and it would be difficult to secure sufficient uniformity along an avenue. The magnolia requires a good deal of special attention in the way of watering, training and staking while young in order to secure shapely trees. The *Liriodendron*, on the other hand, makes a well-shaped tree with very little trouble, is easily grown from seed and thrives wonderfully in the Santa Clara valley. Michaux, in his "North American Silva," describes the tulip-tree forests of former days in Kentucky, where many used to stand of from six to eight feet in diameter and from 120 to 140 feet in height. In that region the trees begin to bloom when six or eight years old, and in California will do even better, although in England, according to "Lindley & Moore's Treasury of Botany," they seldom bloom until past the twentieth year. A tree near Niles, in Alameda county, is about fifteen years old and stands about thirty feet high, with a noble sweep of branches. A mile of such trees on each side of a highway would be beautiful at all seasons of the year, and especially so when in bloom. It is not to be supposed that this tree would ever become too large for proper avenue uses, because it grows slowly after the twentieth year and its ordinary height is hardly above sixty or seventy-five feet.

Of all the trees in North America of deciduous leaves the *Liriodendron* is probably the cleanest in appearance and the most regular in the disposition of its branches, which seem to form almost an ideal type of the deciduous trees. The growth of the leaves in early spring is from the terminal buds, which swell in a peculiar manner and send out five or six leaves very rapidly and in a charming manner. The leaves have three lobes, the middle one of which is notched in the center, giving it a very individual appearance, and in the autumn they assume a golden yellow color before they fall. The flowers are tulip-shaped and shade from yellow to orange and from orange to green, varying more or less on different trees and at different stages of development. Surrounded by luxuriant foliage, they always produce a fine effect and are sold on the street in some of the Eastern and Southern cities.

Huxley, in one of his most interesting essays, uses an illustration drawn from an avenue of tulip trees to show how incomprehensible to the finite mind is the idea of a million. He describes a tulip-tree avenue known to him at one of the famous English parks. This

avenue is three miles long and is supposed to be in full flower. Every square yard of its surface is supposed to contain nine flowers. Mr. Huxley then proceeds to figure out the number of flowers in bloom on this avenue, and it falls far short of the desired million. But, as he says, one might ride along the avenue an endless number of times without being able to carry in the mind a distinct and separate conception of each one of all the units of flowers which go to make up the total.

There are other beautiful American deciduous trees, famous among the spring bloomers, such as the Western catalpa, and, still more glorious in flower but of lesser size, our own California *Cornus Nuttallii*. But let us glance a moment at one or two notable trees from Japan. Among the magnolias of the deciduous-leaved type is *M. conspicua*, in various forms, producing white flowers in spring before the leaves. *M. purpurea*, which varies in color, the predominating shade being purple maroon, belongs to the same general class, and there are many allied species. The larger Japanese magnolias in their native forests are trees of from forty to fifty feet high, and as a tree of thirty feet in height is extremely useful for avenue purposes, the better species of deciduous magnolias should not be forgotten. All these magnolias are of easy growth, and could be raised at slight expense if they were in sufficient demand.

A much-neglected Japanese tree of massive, semi-tropical appearance is the *Paulownia imperialis*. It is a tree with the habit of the *Catalpa speciosa*, and was originally classified with that tree. Its growth is extremely rapid. It has a large, dense and spreading top crowded with abundant broad, rounded leaves which the irreverent might compare to huge sunflower leaves. The chief drawback to the extensive use of these trees consists in the fact that these leaves make a good deal of litter, as is the case with the mulberry tree, the sycamore and nearly all trees possessing large, rapid-growing leaves.

The glory of the *Paulownia* consists in its immense terminal panicles of lavender-colored flowers. The tree was not a success in England, comparatively speaking, because the flowers do not come out well in that climate, and it is far too tender for the Atlantic States. But in California, wherever it is given space to develop, the grandeur of large trees in bloom becomes something worthy of admiration. Where masses of this tree could be planted on hillsides or in ravines, and belted with golden acacias, they might be very beautiful when looked down upon from winding driveways. The tree has a high place in Japanese decorative art. Not only the large flowers and spikes, but the curiously covered brown flower buds, the knotted joints and the speckled stems of the younger growth are used in conventionalized forms, and the flower is especially dedicated to the Emperor's service.

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by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure Deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When the tube gets inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces. We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that cannot be cured by Hall's Catarrh Cure. Sent for circulars, free.

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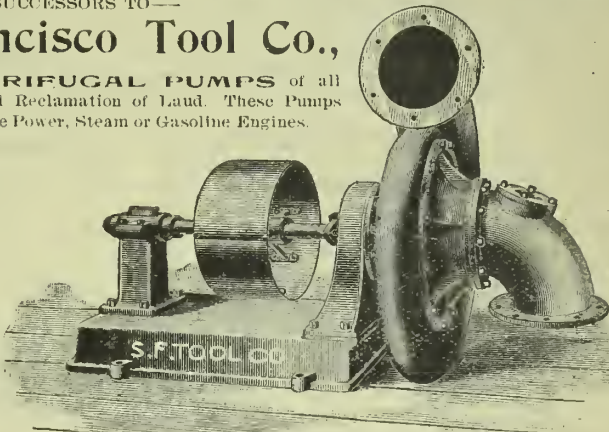
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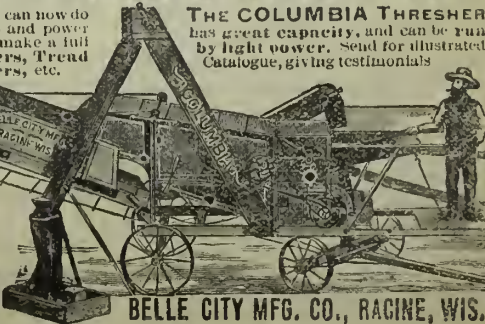
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## Fruit Outlook Near Sacramento.

To THE EDITOR:—I will give below a cursory glance of fruit grown in my orchard, which promises well, if return through the market season proves as remunerative:

## PLUMS AND PRUNES NAMED IN ORDER OF RIPENING.

*White Japan* (or *Argons*); a new early variety; is doing finely. Trees were set out two years ago, and are bearing fine for the first time. Trees make a thrifty growth and now hang with sufficient fruit for the age of the tree. They are round in shape and are over half grown now. Ripen early in June.

*Clyman*; young trees growing fast; fine bearers.

*Prunus Simoni*; set out last year; are making fine growth; can tell more of their bearing qualities next year.

*Peach Plum*; very light this year; seems to be a shy bearer, but did well last year.

*Tragedy*; fair crop this year; sufficient without thinning.

*Mikado* (or *Botan*); two years old; hung full of blossoms this spring and set fruit in abundance for the growth of tree. Last season I grafted a few in the French prune. They formed a fine head, and the fruit now hangs like cherries. Thinning is the only way to make them marketable with the present showing. This and the Burbank are successes if age and maturity show the same.

*Burbank*; set two years ago; the trees make a thrifty growth; trimmed low down and summer-pinned. They have short spears, full bloom, and set sufficient for the age of the tree.

*Yellow Egg*, *Duane's Purple*, *Columbia* and *Hungarian* grow thrifty and fine, and bear abundantly. We are now thinning.

*Satsuma* (or *Blood Plum*); first year out; is growing well.

*Kelsey Japan*; full bloomers; fair crop each year, but second best in quality.

*French Prune*; not such good bearers as in Santa Clara valley. Trees do not make so much wood. The soil seems deficient in richness and depth.

GEO. T. RICH.

Lemon Hill, Sacramento Co., May 4.

## Earth Worms Again.

To THE EDITOR:—In your issue of April 20th is an article on "Snails or Slugs," by Mr. Henry Melde, in which he says: "There are still some of the opinion that angleworms are harmless or even useful, as I saw it once stated by Darwin. \* \* \* Now, he certainly never cultivated any ground except on paper, or else was mad at not finding any worms in his back yard for his fishing."

Mr. Melde evidently considers he has fully exploded the theory of the usefulness of earth worms, held for many years by not only Darwin but by other men somewhat eminent in science, but I must confess I would like some stronger evidence than he offers before I can accept his views; certainly not on his mere *ipse dixit*.

In his work "Man and Nature," by Geo. P. Marsh, a work which I believe stands quite high, are quite a number of instances on most excellent authority given, where land that had been rendered sterile by the destruction of the earth worms in it, was quickly restored to fertility simply by restocking it by the worms which were actually brought from other places and, as it were, planted. I will not quote, for lack of space, but the book is undoubtedly to be found in any good library. I am especially interested in getting at the truth, as naturally this country is so dry that earth worms are not indigenous. We depend entirely on irrigation. At various times I have found the worms in the earth and roots of plants I have received from nurseries. I have carefully planted them and been much pleased to note their increase. Have I made a mistake? My land is surely improving.

G. A. RAYMOND,

Miramonte, Kern Co.

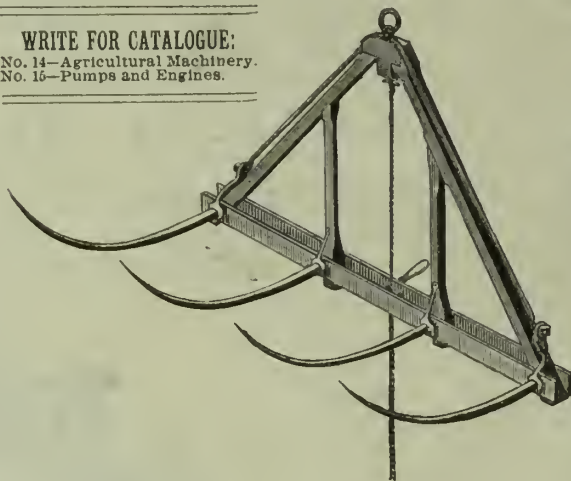
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Made and sold under the following Letters Patent:

No. 210,458.....Dec. 3, 1878  
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No. 403,019.....May 7, 1889  
Other patents pending.

The purpose of this notice is to inform both farmers and merchants, who use or sell Horse Forks, that they must not purchase Horse Forks that infringe the above Patents; and to call their attention to the fact that certain horse forks, manufactured by F. E. Myers & Bro., Ashland, O., and imported and sold by the Deere Implement Company, of San Francisco, are direct infringements of the above patents; the manufacturers of the infringing forks having admitted in Court that their forks were an infringement of the above patents, and are now paying royalty for manufacturing and selling; and they have agreed not to sell any west of the Rocky Mountains.

All parties selling or using these infringing Horse Forks will be promptly prosecuted.

PRICE REDUCED { 3-foot, with 4 tines, each.....\$20 00  
3 1/2, 4 and 4 1/2-foot, 4 tines, each.....25 00  
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Extra Fork Tines, \$2.50 each.

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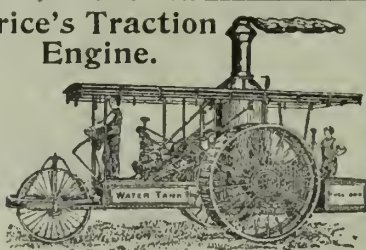
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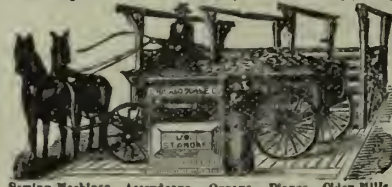
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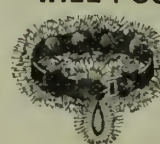


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### FOR MEN AND WOMEN

The latest and only scientific and practical Electric Belt made, for general use, producing a genuine current of Electricity, for the cure of disease, that can be readily felt and regulated both in quantity and power, and applied to any part of the body. It can be worn at any time during working hours or sleep, and

### WILL POSITIVELY CURE



RHEUMATISM  
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### WITHOUT MEDICINE

Electricity, properly applied, is fast taking the place of drugs for all Nervous, Rheumatic, Kidney and Urinal Troubles, and will effect cures in seemingly hopeless cases where every other known remedy has failed.

Any sluggish, weak or diseased organ may by this means be roused to healthy activity before it is too late.

Leading medical men use and recommend the Owen Belt in their practice.

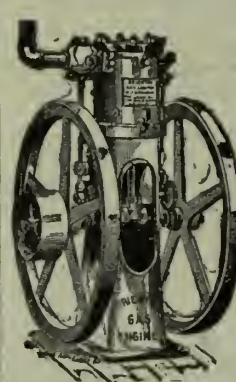
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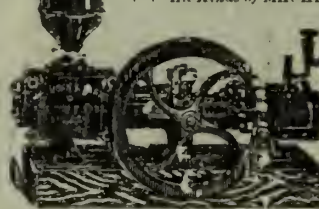
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DEEP WELL PUMPS!

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A Practical Treatise on Raisin Grapes, Their History, Culture and Curing.

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16 & 18 DRUMM ST. S. F.



## S. F. MARKET REPORT.

## Market Review.

SAN FRANCISCO, May 8, 1895.

**FLOUR**—We quote: Net cash prices for Family Extras, \$3 40@3 50; Bakers' Extras, \$3 40@3 50; Superfine, \$2 35@2 50; bbl.

**WHEAT**—The market does not present strong tone. The demand is not of active character, but buyers are obtainable for about all offerings which are suitable for export trade. Shippers place their limit at 86½¢ for No. 1 quality, with 87½¢ for choice parcels. Millers buy at a range of 92½¢ to 97½¢ c. t. l.

**BARLEY**—The situation lacks vim. Offerings are not heavy, while the demand is light, so that business is of humdrum character. Holders of choice feed are not inclined to make concessions, and millers have to give full figures for parcels suitable for their particular needs. We quote as follows: Feed, fair to good, 63½¢@65¢; choice, 66½¢@67½¢; Brewing, nominal.

**OATS**—Nothing of special interest to report in this cereal. For the better qualities there is rather active inquiry, with fair sales, while poorer grades are meeting with moderate attention. Prices are not particularly firm, though the tendency of the market is in favor of sellers. We quote: Milling, \$1 07½¢@1 17½¢; Surprise, \$1 07½¢@1 17½¢; fancy feed, \$1 02½¢@1 07½¢; good to choice, 95¢@1; fair to good, 90¢@95¢; poor to fair, 85¢@87½¢; Black, nominal; Gray, 95¢@1 02½¢ c. t. l.

**CORN**—Nobody wants White Corn seemingly at any price, while the demand for Yellow is anything but brisk. We quote: Large Yellow, \$1 10@1 15; small Yellow, \$1 12½¢@1 20 c. t. l.; White, nominal.

**RYE**—Quotable at 85¢@87½¢ c. t. l.

**BUCKWHEAT**—Quotable at 90¢@1 10 c. t. l.

**OILCAKE MEAL**—Quotable at \$25 c. ton from the mill.

**COTTONSEED OILCAKE**—Quotable at \$24 c. ton.

**MIDDLINGS**—Quotable at \$18@19 c. ton.

**BRAN**—Quotable at \$13 50@14 50 c. ton.

**GROUND BARLEY**—Quotable at \$14 50@15 50 c. ton.

**HAY**—Moderate arrivals cause steady feeling. We quote old: Wheat, \$8@11 50; Wheat and Oat, \$8@11 50; Oat, \$7 50@10 50; Alfalfa, \$3 50@8 50; Barley, \$7@8 50; Clover, \$7@8; Compressed, \$8@10 50; Stock, \$6@7 c. ton.

**STRAW**—Quotable at 40¢@50¢ c. bale.

**FEED**—Manhattan Horse Food (Red Ball Brand) in 100-lb. cabinets, \$8; Manhattan Egg Food, 100-lb. bags, \$11 50.

**BEANS**—Prices are undisturbed. The demand is of slim proportions. We quote as follows: Bayos, \$1 50@1 80; Butter, \$2 25 for small and \$2 25@2 50 for large; Pink, \$1 40@1 60; Red, \$1 40@1 70; Lima, \$4 50@4 70; Poa, \$2 65@2 85; Small White, \$2 65@2 85; Large White, \$2 60@2 80; Blackeye, \$3@3 50; Red Kidney, \$1 90@3; Horse, \$1 60@1 70 c. t. l.

**SEEDS**—Business is quite small. We quote: Mustard, Brown, \$1 25@1 75; Yellow, \$1 75@2; Triesie, \$1 90@2 00; Canary, 3¢@4¢; Hemp, 3¢@3½¢; Timothy, 5½¢@6½¢; Rape, 13¢@24¢; Alfalfa, 7½¢@7¾¢ c. t. l.; Flax, \$2@2 50 c. t. l.

**POTATOES**—Prices lower under receipts today of nearly 1000 sacks. We quote: New, 75¢@81¢; Early Rose, 30¢@40¢; Burbanks, 30¢@50¢; Oregon Burbanks, 40¢@75¢ c. t. l.

**ONIONS**—New crop is coming to hand with freedom. Quotable at 75¢ to \$1 10 c. t. l. for old and 40¢@60¢ for new.

**VARIOUS**—We quote: Cucumbers, 35¢@55¢ c. doz; Asparagus, 60¢@1 00 c. box for the general run and \$1 25@1 50 for choice; Rhubarb, 25¢@40¢ c. box; Los Angeles Tomatoes, —; String Beans, 5¢@6¢ c. lb for Los Angeles and 7¢@9¢ for Vacaville; Green Peas, \$1@1 25 c. sack for common and 2¢@2½¢ c. lb for sweet; Green Peppers, — c. t. l.; Turnips, 50¢ c. t. l.; Beets, 60¢@75¢ c. sack; Carrots, 30¢@50¢; Cabbage, 90¢@1 c. t. l.; Garlic, 10¢@12¢ c. lb; Cauliflower, 60¢@75¢ c. dozen; Dried Peppers, 11¢@12¢ c. lb; Dried Okra, 15¢ c. lb.

**FRESH FRUIT**—Cherries are cheapening, receipts yesterday footing up about 1500 boxes. Strawberry arrivals were 714 chests. Currants are in small supply.

**Berries**—Gooseberries, 2½¢@3¢ c. lb; Strawberries, Sharpless, \$2 50@4 c. chest; Longworth, \$4@7.

**Cherries**—Quotable at 50¢@1 25 c. box for red and black, and 30¢@50¢ for white.

**Cherries**—Quotable at 35¢ c. 10-pound drawer.

**CITRUS FRUIT**—Supplies of oranges are large, with prices easy, except for strictly fancy qualities, of which the offerings are not too large for the demand. We quote: California Navels, \$1@2 50; Seedlings, 50¢@1 c. box; Mexican Limes, \$3 25@3 50 c. box; Lemons, Sicily, \$3@4; California Lemons, 75¢@1 25 for common and \$1 50@2 50 for good to choice.

**DRIED FRUIT**—Trade is light, and the market generally has quiet character. Stocks are small, but this fact does not stimulate the demand.

Following are the prices furnished by the Fruit Exchange. The figures presented represent carload lots, smaller parcels occasionally selling at slightly lower rates:

**Apricots**—Fancy Moorpark, 8¢; choice, do, 7¢; fancy, 7¢; choice, 6¢; standard, 5½¢; prime, 5¢.

**Apples**—Evaporated, 5¢@6¢; sun-dried, 4¢@5¢.

**Peaches**—Fancy, 7¢; choice, 6¢; standard, 5½¢; prime, 5¢; peeled, in boxes, 12¢@13¢.

**Pears**—Fancy, halves, 5¢; quarters, 4½¢; choice, 4¢; standard, 3½¢; prime, 3¢.

**Dried Grapes**—1½¢ c. lb.

**Plums**—Pitted, 3½¢@4¢; unpitted, 1¢@2¢.

**Prunes**—Four sizes, 4½¢@4¾¢.

**Nectarines**—Fancy, 7¢; choice, 6¢; standard, 5¢; prime, 4½¢.

**Figs**—White, choice, 3¢@5¢; black, choice, 2½¢@3¢.

**Raisins**—In sacks (50-lb. boxes selling at ¼¢ c. lb. higher): 4-crown, loose, 3½¢; 3-crown, 2½¢; 2-crown, 2¢; seedless Sultanias, 3¢; seedless Muscats, 2¢ c. lb; 3-crown London Layers, \$1 40 c. box in 20-lb. boxes; clusters, #2: Dehesa clusters, \$2 50; Imperial clusters, \$3; 4-crown, loose, \$1; 4-crown, loose, faced, \$1 15 c. box.

**NUTS**—Chestnuts, 3¢@5¢; Walnuts, 6¢@7¢ for hard shell, 7¢@9¢ for soft shell and 7¢@9¢ for paper shell; California Almonds, 5¢@6¢ for soft shell, 2¢@2½¢ for hard shell and — for paper shell; Pecans, 4¢@6¢; Hickory Nuts, 5¢@6¢; Filberts, 8¢@9¢; Pecans, 6¢ for rough and 8¢ for polished; Brazil Nuts, 7¢@7½¢ c. lb; Cocoanuts, \$4 50@5 50 c. 100.

**HONEY**—Very slow movement. Prices easy. Prospects for new crop are still reported as encouraging. We quote: Comb, 9¢@10¢; water white, extracted, 6¢@7¢; light amber, extracted, 5½¢@6¢; dark amber, 4¢@5¢ c. lb.

**BEEWAX**—Quotable at 26¢@28¢ c. lb.

**EGGS**—Market steady, choice goods being in request at full rates. Quotable at 11¢@12¢ c. dozen for store and 12½¢@14 for ranch.

**BUTTER**—Receipts large and prices weak. There is a very limited outside demand, and local trade is not large enough to absorb the receipts, so

that the depots generally show greater or less accumulation of stocks.

**Creamery**—Fancy, 12½¢@13¢; seconds, 11¢@12¢ c. lb. Dairy—Fancy, 10¢@11¢; fair to choice, 8¢@9¢; store lots, 6¢@7¢.

**CHEESE**—Moderate demand, with liberal supplies. Buyers have the advantage. We quote: Choice to fancy, 6¢@6½¢; fair to good, 4½¢@5½¢; Eastern. ordinary to fine, 10¢@14¢ c. lb.

**POULTRY**—Young Ducks are cheaper. Other kinds are generally steady. Live Turkeys—Gobblers, 11¢@12¢; Hens, 11¢@13¢ c. lb; Roosters, \$5@5 50 for old, and \$7@10 for young; Broilers, \$3@4 for small and \$6@7 for large; Fryers, \$3@4; Hens, \$4 50@5 50; Ducks, \$4@5 for old and \$6@7 50 for young; Geese, \$1 25@1 50 c. pair; Goslings, \$2@2 25; Pigeons, \$1 50@2 25 c. dozen.

**WOOL**—Good Wools are in request, cleaning up well, while medium and poor grades are coming in for better attention. Prices for the latter class, however, incline against sellers.

We quote spring: Year's fleece, San Joaquin, c. lb. 4¢@6½¢; 6 to 8 months do 4¢@8½¢; 6 to 8 months Calaveras and foothill, free 8¢@10¢; Do, defective 4¢@6¢; Northern, good to choice 9¢@11¢; Do, defective 6½¢@8½¢.

We quote Nevada spring:

Light and choice 8½¢@10¢

Heavy 6¢@7¢

We quote Oregon spring:

Eastern, choice 8¢@10¢

Do, poor 6¢@7¢

Valley, choice 9¢@11¢

Do, low grade 8¢@10¢

**HOPS**—No demand. Quotable at 4¢@6¢ c. lb.

**HIDES AND SKINS**—Quotable as follows:

Sound. Culls.

Heavy Steers, 56 lbs up, c. lb. 7½¢@8¢ 6½¢@7¢

Medium Steers, 48 to 56 lbs. 6½¢@7¢ 5½¢@6¢

Light, 42 to 47 pounds. 6¢@6½¢ 5¢@5½¢

Cows, over 50 lbs. 6¢@6½¢ 5¢@5½¢

Light Cows, 30 to 50 lbs. 6¢@6½¢ 5¢@5½¢

Stags 2½¢@3¢ 2¼¢@3¢

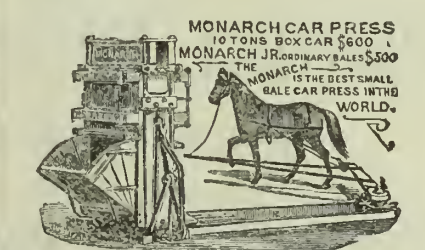
Kips, 17 to 30 lbs. 3½¢@4½¢ 3¼¢@4¼¢

Veal Skins, 10 to 17 lbs. 6¢@7¢ 4½¢@5¢

Calf skins, 5 to 10 lbs. 8¢@9¢ 6½¢@7½¢

Dry Hides, usual selection, 12¢; Dry Kips, 10¢; Calf Skins do, 12¢@13¢; Cull Hides, Kip and Calf, 7¢@8¢; Pelts, Shearlings, 10¢@20¢ each; do, short, 25¢@35¢ each; do, medium, 30¢@45¢ each; do, long wool, 40¢@60¢ each; Deer Skins, summer, 30¢; do, good medium, 15¢@25¢; do, winter, 10¢@15¢ c. lb; Goat Skins, 20¢@35¢ apiece for prime to perfect, 10¢@20¢ for damaged, and 5¢ each for Kids.

**TALLOW**—We quote: Refined, 5½¢@6¢; rendered, 4¢@4½¢; country Tallow, 3½¢@4¢; Grease, 3¢ c. lb.



**Monarch and Junior Monarch HAY PRESS.**

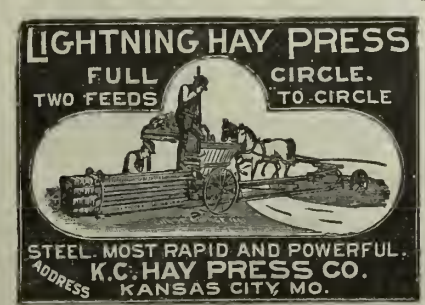
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It is an old saw that the proof of the pudding is in the eating. This is good advice for a man who contemplates buying a Cream Separator. Let him see how well the SHARPLES RUSSIAN SEPARATOR is running when it is used to its full capacity. W. R. Crabb, a level headed creameryman, at Sand Springs, Iowa, says in a letter dated April 19, 1895: "I separate sixteen thousand pounds of milk in 95 minutes with five Russian Separators and run a ten horse power engine five hours all on one-half cord of green willow wood. I make the whole run with eight tablespoonsful of oil—one for each machine and three for engine and shafting. They cost less for oil and fuel and spare parts than any other Separators I ever run." This is from Mr. Crabb just after a competitive test had been made in his factory. He is an experienced separator man. Send for our handsome illustrated catalogue.

P. M. SHARPLES,

West Chester, Pa.,  
Elgin, Ill.,  
Rutland, Vt.

## Baker &amp; Hamilton,

Sole Pacific Coast Agents,

SAN FRANCISCO. SACRAMENTO. LOS ANGELES. NEW YORK.

**"PLANET JR." ALL STEEL HORSE HOE and CULTIVATOR**

are sure to make things grow.

Light, strong and easily controlled by convenient levers. Has attachments for all kinds of hoeing, cultivating and furrowing. Guaranteed superior to any. Our free catalogue tells all about it and 28 other tools. S. L. ALLEN & CO., Philadelphia, Pa.

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OF CALIFORNIA.

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INCORPORATED.....APRIL, 1874



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Reserve Fund and Undivided Profits, 130,000  
Dividends Paid to Stockholders.... 832,000

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## Soil Exhaustion.

The published analyses of California soils show that the chief elements of fertility are present, not only in ample quantities, but also in available forms. Artificial fertilization, as necessary in the East, is a long way off in California, speaking generally. There are, of course, soils which are naturally sterile, but these are seldom used as yet for agricultural purposes. As a general rule, the virgin soil of California is unusually rich in phosphoric acid, nitrates and potash; and, if the methods of farming practiced in the East were general, the natural fertility of the soil might be maintained for many years. But California is pre-eminently a fruit-growing country. The land is largely devoted to a single-crop system, which means a heavy tax on particular fertilizing elements. To illustrate: Grapes draw from the soil over three pounds of potash for every one pound of phosphoric acid; oranges, more than four pounds; olives, about seven pounds; wheat hay, only a trifle above two pounds. In the case of growing wheat hay, the crop is an annual and the rotation system may be adopted at will; also, a reasonable proportion of the fertilizing ingredients of the crop may be returned to the soil in the form of farm manure—that is, a recuperative method of farming is easily attained. With fruit growing, the conditions are different. There is no variation in the demand on the soil. The same nutrients are withdrawn year after year, and what adds to the tendency towards exhaustion is the fact that little or none of the fertilizing elements are returned as manure. In many cases they are shipped out of the State, even as far as the Eastern coast.

The natural fertility of California soils is far above the average, taking the country through, but even this cannot support the continued drain of the present method of cultivation, which returns little or nothing of what is taken off. Even the ash of straw from the burners is largely a dead loss; the high heat forms with the potash and lime small grits of a true glass, which the agencies of the soil can scarcely affect. Soil exhaustion is imminent, and the subject of fertilizers demands the consideration of the great majority of farmers. To continue the field results of the past, the squandered wealth of fertilizing elements must be replaced, in part at least.

An average crop of wheat withdraws from the soil, for one acre, fertilizers as follows: Potash 44 pounds, phosphoric acid 20 pounds; grapes, potash 50 pounds, phosphoric acid 15 pounds; oranges, potash 42 pounds, phosphoric acid 10 pounds; olives, potash 19 pounds, phosphoric acid 3 pounds.

It is only a matter of months for California to reach, at this rate, the impoverished condition of New England and parts of the Gulf States. The extensive orchard systems give nothing back to the soil which it so freely draws upon. Of all the elements of fertility, potash suffers most. It is true that the soils of California are rich in this substance. It would be safer to say, perhaps, in speaking of the older fruit lands, that they have been. There can be no question that much of the developed weakness to resisting disease is due to a lack of the normal fertilizer requirement in minerals. Potash is subject to the greatest drains and should be returned in the form of top dressings of potash salts, preferably as sulphates or muriates—the soil is already sufficiently alkaline. Applications of potash in the forms indicated, worked into the soil by means of spading harrows, tends to correct excessive alkalinity as well as have a beneficial action as a manure. Phosphoric acid in a soluble form should also be applied, but the drain of this element is much less than in the case of potash.

Cholly Chumpleigh: "Yes, gloves are worn in bed at night to make the hands soft."

Mrs. Coldeal: "Indeed! Do you wear nightcaps, Mr. Chumpleigh?"—New York Weekly.

IRRIGATING by electricity is to be given practical test in the San Bernardino valley. The San Bernardino Electric Light Company has arranged an eight-mile circuit to cover the farms and orchards of the vicinity, and by means of stationary pumps and movable motors the water for irrigating purposes will be distributed. The plan is for the formation of small districts along the line of circuit, each district to have the use of a motor. It will be attached to a pump a certain number of hours, just as irrigating ditches are open for regular periods, then moving into the next field connected with the wire, the current turned on, and each field in the district served in turn and as the water is needed. The cost of pumping by the electric motor is estimated at \$1.15 per month per acre, or less than \$7 per acre for the irrigating season at its longest. Water rights cost from \$100 to \$150 per acre, so that the cost of irrigating by the proposed method is less than the interest on the cost of a water right if purchased outright.

## List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING APRIL 23, 1895.

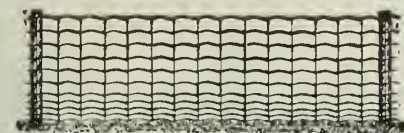
- 538,219.—FRUIT PACKAGE—H. Baskerville, St. Helena, Cal.  
537,912.—LEATHER BLANKS—J. K. Bigelow, S. F.  
537,913.—LOOP MACHINE—J. K. Bigelow, S. F.  
538,150.—DAMPER REGULATOR—A. P. Burnham, S. F.  
537,909.—BUTTON—Thos. Fahey, Spokane, Wash.  
538,076.—CAR COUPLING—C. W. Hinton, Los Angeles, Cal.  
537,894.—WATER TANK—F. W. Krogh, S. F.  
538,000.—ROLLER—J. C. H. Stul, S. F.  
538,050.—PUMP—W. Swabel, S. F.  
538,056.—FOOD WALKER—D. R. Wilder, Los Angeles, Cal.  
538,140.—REIN HOLDER—J. P. Wilson, Red Bluff, Cal.  
538,006.—GAS BURNER—R. Wyndell, S. F.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible by mail or telegraphic order. American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

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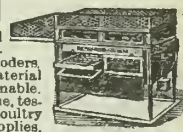


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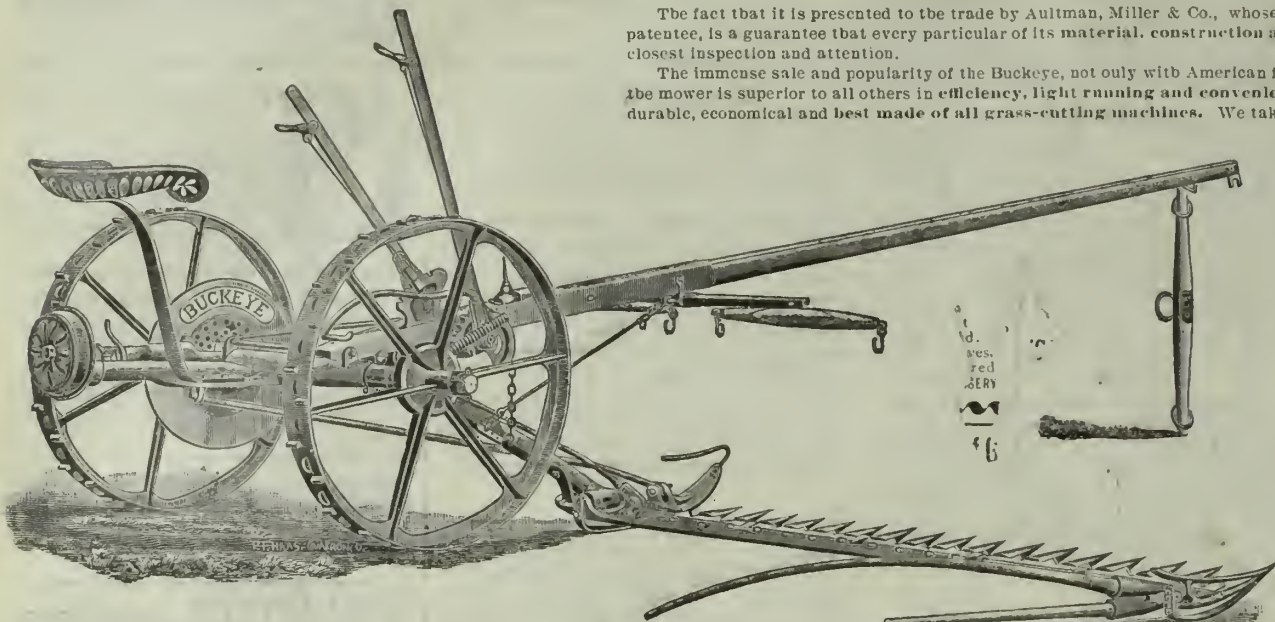
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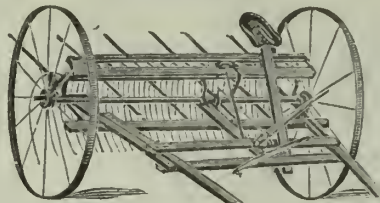
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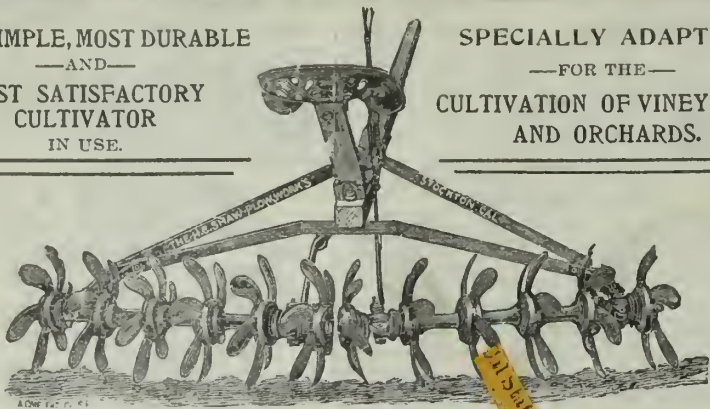
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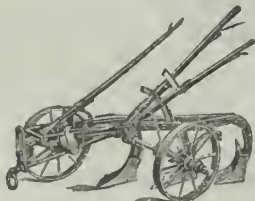
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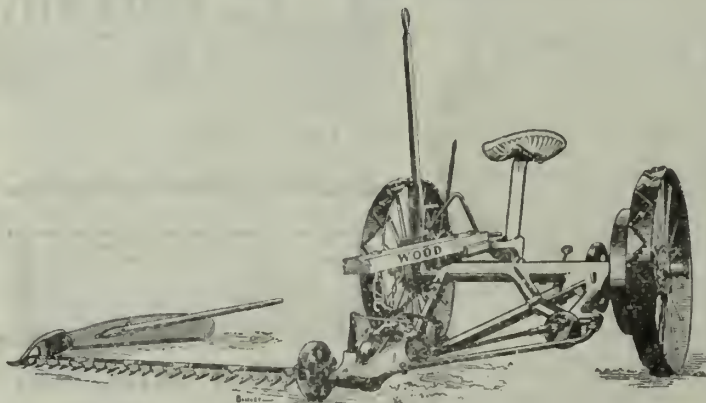
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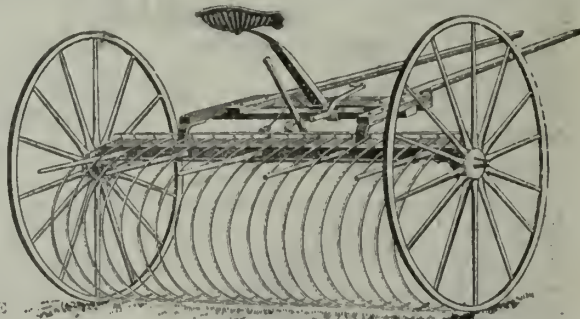
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# CALIFORNIA THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 20.

SAN FRANCISCO, SATURDAY, MAY 18, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

### Upper Coast Scenery.

We have again this week two views from the coast region north of San Francisco—a part of the State which at this season of the year is much in the mind of metropolitans. They represent, first a valley with a good area of cultivable land between high ranges, and second a closer approach to hill and canyon on expanse chiefly interesting for its picturesqueness and outing adaptations.

The beautiful valley with its many native oaks and its tracts of thrifty young orchard is Coyote valley, near Ukiah in Mendocino county. Not only does the view well present the charms of this valley, but it is characteristic also of hundreds of valleys between the ridges of the Coast Range, having warm and deep soil and a climate excellently adapted to a wide range of products, because of the protection which the surrounding elevations afford. In the coming time, when the population of the State is multiplied, all such valleys will be closely set with small farms and the aggregate of their production will be beyond all present data for calculation.

The other view shows Skaggs' Springs, near Cloverdale in northern Sonoma county—a summer resort which has long been known to the outing public. Its waters are very acceptable and salutary to those who seek rest and medicament in original packages rather than through the bottles of the prescription counter. Both the views show places adjacent to the line of the San Francisco and North Pacific Railway, to which allusion has been made in previous notes on the scenery of the region.

THE committee on the tuberculin test at the com-

under no consideration would the owners exhibit their animals if the test was required. The report of the committee was accepted, and the tuberculin test will not be required.

It seems that the beet growers are meeting the cut which the sugar makers make because of loss of

### Better Times.

Nearly all whose opinions are asked agree that there is a better feeling prevailing in all lines of commerce and production. Some count the improvement but very slight, and others conservatively query as to whether hard times do not merely seem



COYOTE VALLEY, NEAR UKIAH, IN MENDOCINO COUNTY.



SKAGGS' SPRINGS IN NORTHERN SONOMA COUNTY.

ing Massachusetts State Fair has made its report. This committee sent circulars to owners of herds asking them if they would make an exhibit provided that six months before the fair all animals were subjected to the tuberculin test and satisfactorily passed. Seventy-two replies were received. The test was preferred by five, while to seventeen it made no difference as to the test. Fifty replies showed that

bounty and low price of sugar. It is announced from Alvarado that the Alameda Sugar Company has contracted for 2,800 acres of beets for the coming season. Last year the price offered was \$5 per ton, and though a reduction of 20 per cent. has been made they have secured nearly as great an acreage as in any previous year. A reduction has also been made in the price of labor on account of the bounty.

easier because people are getting used to them. Even the most cautious concede, however, that people feel better and have greater confidence from some cause or other, and that many answer the present purpose of encouragement. Our Eastern agricultural exchanges bear witness to a similar condition. The Massachusetts *Ploughman* finds promise in several lines. It says: "Business continues to improve in the shape of a general activity all along the line, but no new features of special importance appear this week. The market for stock securities begins to feel the effect of better conditions, and quotations in some lines, especially copper stocks and speculative securities, have advanced notably. General trade, although somewhat quiet, as is usual at this time of the year, is still fairly good. Wholesale prices for boots and shoes have risen as a result of the scarcity of hides. The iron and steel market holds firm and the lumber trade is excellent." Revival in all these lines must affect values for farm produce, and must certainly produce a direct effect upon the products California sells at the East, for they largely partake of the character of luxuries and depend for sale, to a considerable extent, upon those engaged in lines which the *Ploughman* mentions as showing better times.

AN EASTERN EXCHANGE tells of a western New York apple grower who lately shipped a carload of 216 barrels of apples to New York, which sold for \$971.25, netting him \$819.87. The apples were of three varieties, grown on his farm, and assorted as first and seconds. This is said to be the highest price ever received for a carload of apples in that vicinity.

THE assembly concurrent resolution submitting to a vote of the people of New York State a proposed constitutional amendment providing for women suffrage, passed the Senate April 18th.



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ALFRED HOLMAN.....Editor.  
E. J. WICKSON.....Special Contributor.

San Francisco, May 18, 1895.

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## The Week.

### Weather and Crops.

The first half of May brought us wide extremes in form of an unusually long and wide reaching rainstorm and an equally long and wide reaching spell of high heat and dry winds. Both extremes did some injury, but in some respects one repaired the injury of the other. On the whole, crops came through the two ordeals about as well as could be expected, and the season's fruitfulness will not be materially lessened. As usual we have the lighter weather burden as compared with the region east of the Rocky mountains, and as we read of their troubles our own fade from sight. On other pages may be found the California weather and crop report contrasted with the Eastern dispatches describing such disaster as one can well appreciate by the mention of ice and hard frozen ground at the middle of May. There must have been vast injury, not alone to fruits, which are especially mentioned, but to immense values of garden and field crops, which could hardly survive such unseasonable incursion from the frigid zone. The Western Slope has indeed cause to rejoice and give thanks.

### The Yuba City Convention.

Alluding again to the meeting of the State Horticultural Society in Yuba City, at 10 A. M., on Friday, May 31st, we are pleased to announce that on May 10th a special meeting of the Sutter County Horticultural Society was held for the purpose of making arrangements for the coming meeting. W. H. Campbell, secretary of that society, was instructed to request the State Society to invite the following named persons to prepare papers or addresses for the State meeting, on the subjects placed after their respective names.

S. S. Boynton, of Oroville, on "Growing Citrus Fruits."  
Gen. N. P. Chipman, of Red Bluff, on "The Future of Horticulture in California" (or some kindred subject).  
Mrs. Hattie Kells, of Yuba City, on "Amateur Floriculture."

The secretary of the State Society has complied with this request, and it is hoped that these addresses may be had in addition to those published in last week's RURAL PRESS. The meeting promises to be very interesting and profitable.

### Poultry at State Fair.

The managers of the State Fair are doing a wise thing in according more liberal treatment to the poultry interest, and we hope the fact will call out wider interest among exhibitors. There should be at the State Fair as grand a display in this line as the poultry associations secure at their shows, which come at another season of the year. It is true that fowls are not in as good condition generally in September, but care, preparation and choice of specimens will give the public something fine to see, and this will greatly advance breeding interests. Secretary Smith has sent us an advance sheet of the poultry premiums, and we find an offer of about \$600 divided between twenty-eight named breeds of fowls, so well classified that exhibits compete only with those of the same breed. Besides this, President

Chase of the State society offers sweepstakes "for the largest and best exhibit of fowl by one exhibitor." First premium, \$15; second premium, \$10. The society's silver medal will be added to the first premium. All premiums will be awarded under the rules prescribed by the "American Standard of Perfection," edition of 1894, adopted by the American Poultry Association. Premiums as follows will be given for dressed poultry to be on exhibition during the last week of the Fair, and may be shown in refrigerators:

|                                 |        |
|---------------------------------|--------|
| Best pair dressed turkeys.....  | \$3 00 |
| Best pair dressed chickens..... | 2 00   |
| Best pair dressed broilers..... | 2 00   |
| Best pair dressed ducks.....    | 2 00   |

An additional premium of \$10 will be given for the best and most attractive display of dressed poultry. These offers should attract wide attention. It is time to begin at once to get ready for this display. It promises to be a grand feature of the Fair.

### The New Game Laws.

No doubt many of our readers who are county supervisors have questioned how their powers in enacting game ordinances are affected by the game law of the last Legislature. It seems that they have still considerable liberty of enactment in still further protecting game by shortening the open season, but they cannot lengthen it. A local journal, *Field Sports*, gives the following review of the situation, as regards supervisors:

We notice that some of the interior papers, and especially those that were opposed to the new game laws, are asserting that the failure of the new County Government act to become a law leaves the supervisors with the same powers to regulate the open and close seasons for game and fish that they possessed under the old law. This is emphatically wrong. The last clause of the new game law repeals all acts or parts of acts that conflict with its provisions, or the dates that it has set for the opening and closing of the game season. The powers conferred on the supervisors by Section 29½ of the old County Government act will remain in force, so far only as they are not in conflict with the general laws. But whatever powers the supervisors possessed to change the dates of the open season beyond those set by the new game laws, has been repealed by the last clause of that law.

It must not be understood, however, that Section 29½ of itself has been repealed and all powers taken from the supervisors to legislate by ordinance for the protection of game. For the courts have repeatedly decided that where an act of the Legislature provides that all acts or parts of acts in conflict with it are repealed, that this does not repeal the act in its entirety, but only that much as conflicts with the new act. The new act, for example, provides that it shall be a misdemeanor to kill deer between the 15th day of October and the 15th day of July of the following year. It is therefore clear that whatever power did exist, by virtue of said Section 29½, to extend the open season into the time in which the new general law declares that deer shall not be killed, is repealed by the repealing clause of the new law. But as this repealing clause repeals only that which is in conflict with the new, the supervisors will still have the power under Section 29½ of the old County Government act to provide by ordinance that they shall only be killed during a shorter period, but that shorter period must be between the 15th day of July and the 15th day of October; otherwise it would be in conflict with the general law and could not stand.

Section 29½ of the old County Government act granted to the supervisors of the several counties of the State the power to provide by ordinance for the protection of fish and game, and the repealing clause of the new game law only provides that acts or parts of acts in conflict with it shall be repealed. It is perfectly clear that the passage of ordinances for the protection of game is not in conflict with the new law, whose purpose is of itself the protection of game and fish, and that the supervisors still retain this power provided it is exercised within the provisions of the new general game law, but in no case can they go beyond them and lengthen the open season.

This is, of course, from the sportsman's point of view. The matters involved will, of course, be examined from the standpoints of the crop producer and the resident hunter, which do not always coincide with the desires of the sportsman. The supervisors will be apt to take advice beyond that given them above, and it will be wise for them to do so. We shall be glad to give space to discussions of the matters involved.

### Refrigerator Cars Preferred.

The enterprise of the railway company to popularize a fast ventilated car service to escape the extortion of the refrigerator car companies does not promise well, judging from early experiments. We do not know how far the reports are colored by refrigerator car interests. We hope it may prove that these early reports of failure without ice are not true, but we give the information as it is wired from New York:

The experiment of sending California cherries to this market in ventilated instead of refrigerator cars has proved to be unsuccessful. Small shipments have been received daily, but invariably in very poor condition, the long journey through hot weather without the use of ice causing them to arrive in a complete state of collapse. No advices have yet been received of any carload shipments having been made, and it is the hope in the trade that none will be made except in refrigerator cars carrying a sufficient quantity of ice to assure the preservation of the fruit and its arrival in marketable condition.

Regarding the ventilated-car experiment, the Earl Fruit Company, which receives large quantities of California fruits, says: "The experiment which has been so unsuccessful with cherries is being tried on oranges with more or less disastrous results, as the auction sales of the week have fully demonstrated. Had the same quality of seedlings been properly packed and iced, they would have sold for from 50 to 75 cents a box more than was obtained for those that came in ventilated cars."

Complaint is also made of the style of packing (or rather the lack of it), which is followed by some orange shippers. If this is true, it should be swiftly bettered. There is no excuse for bad grading and packing. It is a horticultural misdemeanor.

## From an Independent Standpoint.

In the news columns of last week's RURAL PRESS there appeared the following paragraph:

The Yolo winery has recently sold 98,000 gallons of wine to the New York firm of Sgobel & Day, at "satisfactory prices." F. Mieling, the agent of the winery, estimates that the stockholders realized about \$6000 more for the stock than they would have done if it had been sold to San Francisco dealers.

Now, the fact that a producer in central California can do better to trade in New York than in San Francisco, is not creditable. It is the proof that San Francisco is not fairly meeting her responsibilities. Something is clearly wrong with a commercial city when it cannot serve the interests of its tributary country, for it is by such service that it proves its right to exist. San Francisco lives upon California and in return it owes to California the opportunities of a commercial depot. That is, if a producer has grain or wool or wine or any other staple commodity to sell, San Francisco ought to afford a market for it equal to any other market. If capital is needed to develop the country, San Francisco ought to supply it, of course under proper business conditions. But if San Francisco allows the producer to trade to better advantage in New York; if she allows distant countries to supply capital when it is needed; if she does nothing but exact toll, then she must not complain if her business declines and her tributary communities establish their connections elsewhere. In these times other relationships between communities follow the business relationship. These reflections are respectfully referred to the Half Million Club of San Francisco. The city will not get her half million so long as producers of staple commodities can save money by giving San Francisco the go-by and doing their trading elsewhere.

The interest naturally attaching to the remarriage of Gen. Grant's daughter Nellie is increased by the circumstance that the bridegroom-elect, Gen. Douglass of Maryland, was a Confederate soldier and fought bravely in the armies which finally surrendered before Richmond. Gen. Douglass is described as a very genuine man, and it is not his fault that he is considered one of the handsomest men about Washington. He comes of a well-known Maryland family, and is practically without fortune. Nellie Grant's first marriage was a wretched failure. Sartoris was an Englishman of the sporting type, who cared more for his horses and dogs than for his wife. She—be it said to her credit—bore her cross without wailing; but the facts were too outrageous to be concealed, and her unhappiness was no small part of the grief which filled the last years of Gen. Grant's life with bitterness. In marrying again Nellie Grant has wisely accepted a man of her own country—one who is not rich enough to feel superior to the ordinary responsibilities of life—and all who honor the memory of her father will wish her in this venture all manner of good fortune.

In a sense, the course of the Administration in the Nicaraguan affair has been vindicated, for—after exacting securities for payment of its demands—the British Government has withdrawn its armed forces from Corinto. But there is a very general feeling on the part of the American people that, in allowing England, in a military sense, to take possession of the Nicaraguan port, our Government has made a concession which may in times to come breed trouble. Furthermore, we have by this incident needlessly sacrificed a certain confidence which the Central and South American republics have cherished toward us, since the announcement of the Monroe doctrine in 1823. All this is the more provoking when we consider how simply and easily the whole matter might have been avoided. A suggestion from Washington that the Government of the United States would consider the landing of British troops on Nicaraguan soil as an unfriendly act would have been quite sufficient. The United States, of course, has nothing to do with the differences between Nicaragua and England; but so far as we can learn, the equities of the case appear to have rested wholly with the former. The money demand—payment of which has been enforced—was for \$77,500, alleged to be the equivalent of losses sustained by a British Consul by expulsion from Nicaragua. The man, it appears, was a saloon-keeper, whose whole property is de-



clared to have been worth less than a thousand dollars.

There has come a hitch in the affairs of the San Francisco and San Joaquin Valley Railroad in connection with the lease of water front lands in this city belonging to the State. The act passed by the recent legislature authorizing a lease of the tract known as China Basin for a term of fifty years provided that the assent of the Mayor of the city should be given before the contract could be closed; and it is in this connection that trouble has arisen. Mayor Sutro is not satisfied with the proposition as it has been arranged, and he has declined to approve it until further assurances have been given that the tract shall not by any sort of jugglery fall into the hands of the Southern Pacific or of interests friendly thereto. His objections border on the whimsical, but they must be respected, and the outcome must be a contract upon which there cannot rest the shadow of a doubt. The people of California will, we feel sure, stand with the Mayor in demanding the assured permanent independence of the Valley Company before endowing it with special advantages. It may be some trouble to put the matter in the shape he demands, but the end desired is worth it.

In all other respects the plans of the Valley road promoters are working prosperously. The cash subscriptions to the capital stock now aggregate upwards of three millions of dollars, and other subscriptions, conditional upon connections with special points, will swell the figures by another million. Surveyors are in the field south of Stockton, and the directors are travelling through the Valley in carriages to personally view the country. A large quantity of rails, bought at a low figure, are now being loaded at New York and will be due here in the early fall. That California is to have a competing railroad built by business methods is now a matter beyond question, and it is authoritatively announced that it will be ready to handle the crops of 1896. As to its exact route there has as yet been no final determination, excepting that it will directly connect with tide water at Stockton. No decision has been reached respecting the Santa Clara Valley, but, in the judgment of the *RURAL*, there is almost no doubt that one branch of the road will go that way.

### Disaster to Eastern Fruit Crops.

An Occurrence Which May Greatly Affect the Value of California Fruits.

When we gave in the last *RURAL* the glowing reports of Eastern fruit prospects, we cautioned the reader that he should not allow such reports to unduly depress prices for California fruits, because it was really too early to accept Eastern reports of abundance. The truth of that caution now appears in a more striking manner than we thought possible when we gave it. There has been a disaster to the fruits of the Northern States apparently quite as destructive to summer fruits as the Florida freeze was to citrus fruits. This matter is of the greatest importance to those who have fruits to sell, and we give quite fully the dispatches received on the subject:

NEW YORK, N. Y., May 13.—Reports from many sections of the State indicate that last night's frost did an immense amount of damage to growing vegetables, crops and fruit. Telegrams from Dunkirk state the entire grape crop of Chautauqua grape belt was ruined. The loss is estimated at \$1,500,000 in this belt.

The Chautauqua grape belt extends through Erie county westward to Erie. It occupies a strip from six to eight miles in width along the southern shores of Lake Erie.

The number of acres bearing grapes last year was 26,000. This year 35,000 acres would have been bearing. The vines were loaded with blossom-buds last evening, and to-day, from one end of the belt to the other, the vineyards are nothing but blackened ruins, and have the appearance of having been visited by fire. Three thousand six hundred cars were loaded from the belt last season.

At Westfield the vines were entirely cut down. Some growers will plow up their vineyards and return to the old style of farming. Brockton, generally known as the center of the Chautauqua grape belt, is in mourning to-day. Nothing is raised there but grapes, and the frost of last night cut them all down.

Jerry Hickman, the millionaire grower and wine manufacturer, says the loss in the belt, by reason of the destruction done to the grapes, will reach at least \$2,000,000. His own loss he estimates at \$250,000.

At Fredonia nothing of the grape crop can be saved.

BUFFALO, N. Y., May 13.—Dispatches from all over western New York prove this section of the State has suffered from the frost. Along the grape belt in Chautauqua county the grape growers took a melancholy outlook, and some messages state that the crop is entirely destroyed.

In Niagara county small fruits are frequently raised. There is a disposition to take a gloomy view of the ravages of the frost, but conservative judges think the damage not general nor severe. Next to grapes, strawberries have, perhaps, been more seriously hurt.

In Allegheny county the lowest temperature recorded was 25°, and it is likely all kinds of fruit have been damaged.

Dispatches from western Ontario indicate that the tempera-

ture was very low there and the damage perhaps very much heavier than on this side of the border.

PITTSBURG, May 13.—Eastern Ohio, western Pennsylvania and western Virginia were visited last night by a heavy white frost. The mercury dropped to 32°, and in exposed places ice formed a quarter of an inch thick. Garden truck and grapes were nipped and small fruits were destroyed. Nearly all the apples on low ground are frosted.

CINCINNATI, May 13.—Dispatches from northeastern Ohio report heavy damage by frost. The mercury fell 4° below freezing point last night.

CLEVELAND, O., May 13.—Telegrams from numerous points throughout northern Ohio show that the heavy frost last night was most disastrous in its effect upon fruit and early vegetables. The damage is enormous.

DETROIT, Mich., May 13.—Snowstorms were reported last night from all the principal points in western Michigan and from the northern peninsula and portions of the southern peninsula. The consensus of dispatches from this region is that if the wind abates fruit will be badly frozen. Early vegetables and small fruits have already greatly suffered, and there are the gravest apprehensions regarding the entire crop. In the northern part of the peninsula and State, however, a heavy snow fell with a freezing wind from the northeast, badly damaging vegetables and tender huds.

GRAND RAPIDS, Mich., May 13.—The most reliable advices obtainable here indicate that so far fruit has not been materially injured in western Michigan, but great anxiety is felt for its fate to-night. The mercury stands at 33 degrees in a driving snowstorm from the north, which may drive it down to 30 or 28 degrees before morning.

MONMINEE, Mich., May 13.—A howling blizzard passed over the city last night and snow is from three to four inches deep to-day. All gardens and many fruit and shade trees are ruined.

VALPARAISO, Ind., May 13.—The heavy storm to-day did a great deal of damage in this county. Snow fell this afternoon, and it is below the freezing point to-night. Early fruit will all be killed.

MILWAUKEE, May 13.—This evening the temperature has fallen and there is every indication of another frost during the night. Snow fell at Manitowoc, Edison, Chippewa Falls, Oshkosh, Appleton, Wausa, Dalmira and other places in nearly every section of the State.

OSHKOSH, Wis., May 13.—An inch of snow fell here to-day, and the thermometer is at freezing point. Great damage has been done to the early fruit and gardens.

GREEN BAR, Wis., May 13.—A severe blizzard prevailed here from midnight to 9 A. M. to-day. Three inches of snow fell, accompanied by wind blowing at forty miles an hour. Great damage has resulted to the fruit, market gardens and growing grain.

NEENAH, Wis., May 13.—The snowstorm last night destroyed numerous fruit trees in this vicinity. The snow was so wet that it caused limbs of trees to break off, and small trees were leveled to the ground. Snow fell again this afternoon, but it was light.

SPARTA, Wis., May 13.—The heavy frosts killed all the grapes in this vicinity. Of the hundreds of acres of small fruits only about 10 to 15 per cent. of the strawberries were damaged.

CUMBERLAND, Wis., May 13.—There was a very heavy frost throughout this region this morning, killing all kinds of vegetation. The ground was frozen hard enough to hear up a team of horses on the crust of the plowed land.

OMAHA, May 13.—The Nebraska corn crop was damaged in the low lands by the frosts of the past three days. Fields of thirty to forty acres are ruined. This will not affect the acreage, since the fields are being replanted.

MINNEAPOLIS, May 13.—Last night's frost was severe in Minnesota and South Dakota. Snow fell at Ely, Tower and Iron Range points. Garden truck and small fruits suffered badly and grain in a lesser degree. Wheat is reported damaged slightly and oats badly in some quarters. Cranberries, strawberries and other small fruits in western Wisconsin are frozen solid.

WASHINGTON, D. C., May 14.—The Weather Bureau, in its weekly report of the weather-crop bulletin issued to-day, states that the general feature of the week was the remarkable cool wave which overspread nearly the whole country east of the Rocky mountains on the 11th and 12th inst., attended by freezing weather in the Northern States and frost as far as the Ohio valley and western portion of South Carolina. This period of cold has proved very unfavorable to growing crops and much injury has resulted from the frosts throughout the northern portions of the country. The line of freezing temperature extends from western Montana southeast to western Nebraska, thence northward to southern North Dakota, and thence eastward through the northern portions of Minnesota, Wisconsin and Ohio and western Pennsylvania to western New York, the lowest temperature being about ten degrees below the freezing point in the extreme northern portions of Minnesota.

BOSTON, Mass., May 14.—Heavy frosts in different parts of this State did much damage last night to the fruit crop. Plums, peaches, pears and grapes were blighted in many places, and apples were seriously damaged. Severe frosts are reported from all parts of northern Rhode Island, the temperature falling to 30 degrees. Near Winsted, Conn., ice formed three-quarters of an inch thick, the thermometer marking 25 degrees. Apple blossoms were nipped and garden vegetables ruined. Serious damage was done to fruit and all early crops in New Hampshire and Maine, the ground freezing half an inch or more in many places.

### Gleanings.

VISALIA shipped in a carload of potatoes last week, and her people ought to be ashamed of it.

FULLERTON, Orange Co., is to have a co-operative cannery. It will afford employment to from fifty to seventy-five persons during the fruit season.

VENTURA has organized an Agricultural Society, and will hold a county fair this fall. The whole of the capital stock, \$30,000, has been subscribed.

According to the *Register* more corn has been planted in Napa valley this season than for two or three years. Farmers find it more profitable than other grain.

The Pomona *Progress* reports that in its locality apricots will be half a crop. The present outlook for prunes about Pomona is good. Pears also promise a good yield.

The Cloverdale *Reveille* reports that Leroux Bros. sold 16,000 gallons of claret last week to the San Francisco firm of Lachman & Jacobi at 12½ cts. This sale clears out the Leroux cellars.

DINUBA letter in *Traver Advocate*: A large, ugly-looking destroyer of vegetation resembling the tobacco-worm has showed up in some of the unpruned and neglected vineyards east of Dinuba, and is devouring the foliage of the vines at a

rapid rate. So far they have only been seen where the vineyards were not pruned, but they will hear watching lest they take in the others also.

CLOVERDALE *Reveille*: The wine men in this district are seriously thinking of classifying grapes this year, paying a relative higher price for hill grapes than for those grown on valley land.

The first car of ripe deciduous fruit to leave California for the season of 1895 was shipped from Vacaville on last Thursday, the 9th, and contained 1750 boxes of cherries. Since the 9th daily shipments have been forwarded.

At a meeting of Napa valley fruit growers last week, a committee was appointed to confer with the fruit growers of Vacaville with a view to co-operation in the loading and forwarding of fruit cars for the Eastern markets.

BIGGS *Argus*: On Rio Bonito most of the apricot trees are well laden and many will have to be thinned out to some extent that the trees may mature large, choice grades of fruit. The almond trees are looking fine and promise a paying crop.

SANTA MARIA is getting up a district fair independent of State aid. The *RURAL* is willing to wager something handsome that it will be a better fair than under the old plan, for it will be purely representative of local enthusiasm and enterprise.

The Van Allen fruit cannery at Healdsburg burned down on Thursday of last week; loss, \$6000. The loss of this plant is of much consequence to the Healdsburg district, for, while it was not operated last season, it had been in running order and fruit-growers hoped it would be put in operation this year.

WINTERS LETTER in *Woodland Democrat*: The only orchard on low ground in which the fruit crop has not been injured is that of B. R. Sackett. The escape of his trees is attributed to the fact that his orchard is almost constantly swept by the canyon winds, and in this instance the canyon winds seem to have kept the frost down. Orchards with an elevation above ten or twelve feet are in fine condition.

J. F. MCINTYRE, of Filmore, has sent 300 ladybugs that feed on the black scale to the Government Entomologist at Washington in exchange for another variety of the ladybug which eats the San Jose scale. The Santa Paula *Chronicle*, from which we glean this item, says: Mr. McIntyre has furnished the black scale-eating ladybugs to all who have applied for them, and they are giving very satisfactory results all over the country. He hopes to rid Ventura county of the pest.

At the a meeting of directors of the Santa Clara County Fruit Exchange, held on the 11th, the following officers were elected: Philo Hersey, president; C. F. Wyman, vice-president; Noah G. Rogers, secretary; Union Savings Bank, treasurer; F. M. Richter, J. T. Grant, G. A. Benn, H. C. Morrell, W. H. Wright, H. G. Keesling. This election was only a formal ratification by the directors of a choice practically made at the meeting of stockholders two weeks ago.

SANTA ANA *Blade*: A great many farmers are complaining of the return of the destructive army worm, a species of caterpillar, the presence of which is particularly menacing to alfalfa crops. About three years ago these worms became numerous in this section, the ground in places being literally black with them, and the injury to alfalfa, consequent upon their ravages, caused heavy loss to farmers. \* \* \* They invariably travel northeast, making a clean sweep of the succulent leaves of alfalfa as they go.

The Eastern demand for California oranges continues good, and heavy shipments continue to be made. Up to date for the season the Riverside Exchange has dispatched 1,490 carloads. The total amount of returns from shipments through the Exchange, and already paid to associations, is \$274,272.73. The navels have about all been shipped, and the seedlings are now going forward rapidly. Last week, so the *Riverside Press* declares, was the greatest orange shipping period of like length in the history of the valley, being an average of over 35 carloads per day.

FRUIT GROWERS about Porterville are becoming alarmed on account of the neglect of certain orchard owners whose infected trees are a menace to all other orchards in the district. Upon representation that the Horticultural Commissioner for the district, R. H. McDonald, had given little attention to the business, the Porterville Horticultural Society has formally asked him to resign and has recommended J. Fred Kessing of Plano for the place. Also a committee was appointed to correspond with fruit growers in the northern part of the State with a view of co-operating in matters of packing and schedule of prices.

The honey bees in the woods of the Sierras are multiplying very rapidly and there are thousands of trees in Butte county which contain a fine quality of honey. The bees begin working there in March and continue until June, storing great quantities of honey. Then, as most of the flowers are gone, they gather honey from fruit and from honey dew and make limited quantities until frosts come in the fall. Higher in the mountains, about Mooretown, Lumpkin, Powelton, Inskip, Brush Creek and Merrimac, they begin as soon as the Manzanita bushes are in bloom and continue working until the cold weather in the fall stops them.

SEBASTOPOL *Times*: W. J. Hotchkiss and G. W. Huntly drove out into the country one day last week looking up the fruit situation. They found that there will be a short cherry crop as well as a considerable falling off in peaches, prunes and pears, especially the latter. The most damage to orchard products was inflicted in the low spots. C. A. Cadwell has in one orchard 1,100 Bartlett pear trees, from which last season he sold to the cannery alone sixty tons of fruit. Together with what was otherwise sold and wasted, 100 tons would not be too high a figure at which to place the yield of those 1,100 pear trees. This season, however, Mr. Huntly says he will be surprised if the 1,100 trees yield half a ton of pears. Mr. Huntly's own Bartlett pear trees will yield almost nothing. Other varieties promise better, but the fruit will be scabby.

AFTER personal observations in Butte, Yuba and Sutter counties, Mr. T. B. Hutchins informs the Oroville *Register* that in the counties named apricots will not be over one-third of a crop, cherries a third, prunes from a third to a half crop, almonds not a heavy crop, peaches only a fair crop at best, and Bartlett pears practically no crop at all. The peaches would have been a heavy crop had not curl leaf set in so bad, but this will cause the loss of a great deal of fruit. As there are some varieties that will not curl these will bear heavily. In Butte, as most of the peach orchards are young, four, five



and six-year-old trees, he is confident that the crop will be heavier than where the orchards are older, for a young peach tree will bear under unfavorable conditions where older trees would have no crop at all. He says the fruit growers of this county will probably realize more money this year from their reduced crop than they did last year from a full crop, for prices are sure to be high, the railroad service will be much better, and if fruit goes through to Chicago in five days with ventilator cheap service, the grower will realize a fair profit from all the fruit he produces.

**TULARE REGISTER:** Our fruit growers and dealers are feeling pretty good over arrangements to dispense with the refrigeration of fruit going east and the attendant reduction in rates, and well they may, for the benefit will be great, but not of the kind they now anticipate. The saving, before the season is over, will go to the consumers of the fruit, and not to the producers of it, but an increased consumption of California fruit in Eastern markets is what our State is suffering for, and to have such increased consumption fruit must be put on the tables of Eastern people at a much less price than now. After all, the great problem is yet to be solved—that of effective distribution without glutting markets or having the profits consumed by bunco commission men and retail dealers.

**JOHN DE TURK,** the well-known vineyardist of Sonoma county, is quoted as follows: "We are going to have ten years of very good business in wine-making. I think it will pay very handsomely. In the first place, the stock on hand is not very large, and a market at fair prices has been found for all that California is producing. Our product last year was 12,000,000 gallons or thereabouts. Our own home consumption is from 6,000,000 to 8,000,000, and our Eastern and foreign market amounts to 22,000,000 gallons or thereabouts. So there is a demand for more than we are producing, and prices must go up. The vineyardist will get, I think, from \$10 to \$12 a ton for his grapes, and that is much better than \$6 to \$8, for which he has heretofore been obliged to sell his product. The phylloxera is making ravages, and will continue to do so as long as there is anything left for it to feed upon. The only remedy is a resistant stock. There is every reason to believe that, with the diminished product that has resulted from the destruction spread everywhere by phylloxera and also the uprooting of large tracts in vines, because its cultivation has been unprofitable, prices for grapes and wine will remunerate. I look forward to ten years of good business for wine-makers."

### Rainfall and Temperature.

The following data for the week ending 5 A. M., May 14, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA<br>ATIONS. | Total Rainfall for the<br>Week..... | Total Seasonal Rain-<br>fall to Date..... | Total Seasonal Rain-<br>fall Last Year to<br>Same Date..... | Average Seasonal Rain-<br>fall to Date..... | Maximum Temperature<br>for the Week..... | Minimum Temperature<br>for the Week..... |
|-----------------------|-------------------------------------|-------------------------------------------|-------------------------------------------------------------|---------------------------------------------|------------------------------------------|------------------------------------------|
| Eureka.....           | 41.76                               | 52.54                                     | 41.45                                                       | 68                                          | 42                                       |                                          |
| Red Bluff.....        | 28.40                               | 20.30                                     | 24.31                                                       | 98                                          | 50                                       |                                          |
| Sacramento.....       | 23.90                               | 14.37                                     | 20.92                                                       | 94                                          | 50                                       |                                          |
| San Francisco.....    | 25.41                               | 16.60                                     | 23.71                                                       | 89                                          | 50                                       |                                          |
| Fresno.....           | 14.14                               | 6.83                                      | 10.67                                                       | 98                                          | 52                                       |                                          |
| Los Angeles.....      | 15.86                               | 6.55                                      | 19.55                                                       | 88                                          | 50                                       |                                          |
| San Diego.....        | 11.56                               | 4.10                                      | 10.47                                                       | 86                                          | 42                                       |                                          |
| Yuma.....             | 2.97                                | 2.16                                      | 3.54                                                        | 108                                         | 66                                       |                                          |

### Sacramento Notes.

**TO THE EDITOR:**—The past week has had its variations; royal weather, plenty of sunshine, breezy winds, with a great norther to cap the climax. The wind switched the fruit off the outside branches and played havoc generally, but the papers have overdrawn its effects.

The strawberry men at Florin are busy shipping their fruit. Cultivation is the order of the day in orchards and vineyards. The outlook for shipping fruit seems brighter with the different companies. Still it is carried by one company after all.

The frost of last month was light here, touching more heavily along the river and bottom lands. Fruit trees show excess of growth over last year at this time. Grapes are in fine condition, setting well and not affected by the wind. There are plenty of plums left, and peaches. We save the thinning.

Florin is a large shipping point for grapes and deciduous fruits. Over ninety cars were shipped last year.

The late winds have started many to cutting hay. Hay and grain will be plenty. **GEO. T. RICU.**  
Lemon Hill, May 11, 1895.

### To Destroy Peach Aphid.

The following formula for a spray is recommended and approved by the State Board of Horticulture:

Caustic soda (ninety-eight per cent), one pound; rosin, six pounds; water, forty gallons. Directions—Place rosin and caustic soda in a vessel with three gallons of water, boil over a brisk fire until thoroughly mixed, then add hot water to make twenty gallons, after which add twenty gallons of cold water, when it will be ready for use.

### Weather and Crops.

Director Barwick, of the California Weather Service, in his weekly weather and crop report ending on the 13th, summarizes as follows:

As compared with the normal temperature there was an excess of heat as follows for the Weather Bureau stations named: Fresno, 5°; Los Angeles, 3°; Sacramento, 6°; San Francisco, 8°; San Diego, 1°.

This excess of heat and deficiency of moisture, with an excess of sunshine and warmth, has been extremely beneficial to all crops. Haying is going on from one end of the State to the other and the crop is reported as good in yield and excellent in quality.

The high winds damaged considerable early fruit by whipping it off the trees, thereby doing away with thinning it by hand. What remains will no doubt mature finely. Cherries seem to have been the most damaged of any fruit.

The highest temperature was 98° in the San Joaquin valley, and about the same in the Sacramento valley, and from 94° to 95° in southern California. The hot wave was therefore not a local one.

#### Santa Clara Valley.

**SANTA CLARA (Gilroy)**—The fruit crop on the Glen ranch, with the single exception of apricots, which will not be over a good third crop, will be excellent. Cherries, peaches, plums and prunes all promise a full crop. The vineyard is looking splendidly, and has every appearance of a large yield.

#### The Foothills.

**PLACER (Newcastle)**—The week has not been quite so warm as upon the same dates of last year. The high winds that have visited other parts of the State and did so much damage by blowing the fruit off the trees, did not reach here, consequently no damage was done in this vicinity. (Rocklin)—Heavy north wind thinned out fruit and broke off some of the new growth, but not enough to damage trees or affect crops. Haying is in full blast.

#### Northern Coast Valleys.

**MENDOCINO (Ukiah)**—Hot days have caused a little rust in heavy grain and sweat in alfalfa. Fruit is not injured. All in all, crop prospects are first class. Hops are growing slowly, but the hot weather will hurry them up.

**LAKE (Upper Lake)**—Summer-fallowed wheat and barley could not be better, and the same is fairly true of the late-sown. The frosts of the early spring did a good deal of damage to fruits of all kinds, and peaches have been suffering from curled leaf. Grape vines are coming out well and give promise of a heavy crop.

**SONOMA (Healdsburg)**—The fruit prospects are gloomy. There will be few apricots, and Bartlett pears are dropping badly. The peach crop will also be short. Apples, plums and prunes have set heavy on the trees and there will be a big yield of each. Never in the history of the valley has there been such an abundance of grass, and in consequence all kinds of stock are sleek and fat. Vineyards give promise of a good crop. (Sebastopol)—Weather has been quite warm this week, being helpful to fruits, berries and vines. A light, hot wind on the 9th inst., but no damage apparently. Blackberry vines in full bloom and promise a large yield. Hops seem to be making a good start.

#### San Joaquin Valley.

**KERN (Bakersfield)**—The rise in temperature is causing a rampant growth and bringing plenty of water by melting snow. The alfalfa and grain fields give assurance of a bountiful harvest. Haying is progressing under most favorable weather.

**MADERA (Madera)**—Weather still favorable for all crops. The few days of very warm weather was needed for the grapes, putting an end to the ravages of the cutworms and starting grape growth. The previous cool weather has delayed the fruit. Grain is being cut for hay, and weather is all that could be desired for drying.

**MERCED (Livingston)**—Rye crop in this vicinity is doing well; and if we do not have any wind to shell it out, the yield will be good. Wheat is not doing so well; it does not seem in a healthy condition.

**SAN JOAQUIN (Lodi)**—Haying is well under way; quantity per acre below the average; quality good. Wheat heading out and looks well on summer-fallow; late-sown does not look so well; has a stunted, rusty appearance. A species of aphid is at work on the roots. The strong north wind damaged fruit somewhat.

**STANISLAUS (Turlock)**—The late-sown grain is looking better in the sand. We have had some very hard winds this week; and with the heat and the rust and a worm that is working in the head joint of wheat, will make it a short crop here. On the west side south from Crow's Landing to Los Banos there will be an average crop of at least eight sacks to the acre. Rye is good here.

**TULARE (Goshen)**—Haying is going forward. Weather is fine for it. The crop will be large. All crops are coming forward rapidly. Weather quite warm.

#### Sacramento Valley.

**TEHAMA (Vina)**—North wind the 8th, 9th and 10th did some damage to young trees, breaking the tender twigs off. Some peaches have dropped.

**BUTTE (Durham)**—The four days of north wind during the past week did considerable damage to late grain, forcing it too rapidly to maturity, much of which will be very short.

**COLUSA (Grand Island)**—The heavy north wind of the 9th hurt the fruit some by whipping from the trees.

**SOLANO (Vacaville)**—A heavy north wind has prevailed for the past two days, which has done considerable damage to the grape crop, especially the Tokay variety. Other fruits have suffered in some localities to a considerable extent, while in others it has proved beneficial thus far, as it will save the extensive thinning that would have been necessary otherwise. (Batavia)—The north wind blew a great deal of the fruit off the trees, also did considerable damage to the barley crop, as it broke the heads off, and that which was pretty well advanced shelled out.

**YOLO (Davisville)**—High north wind began on the night of the 8th and continued all day of the 9th. It must have blown off one-half of the crop of peaches, pears, prunes, plums, almonds, and in fact one-half or more of all tree fruit. Heavy grain was flattened by the wind. Some trees look scorched and lots of foliage is whipped off.

**YUBA (Marysville)**—The recent north wind did considerable damage in Sutter and Yuba counties, the cherry crop being considerably damaged. (Wheatland)—No damage to grain from recent north wind, but all kinds of fruit suffered severely, especially pears and cherries.

#### Southern California.

**SAN LUIS OBISPO (San Luis Obispo)**—Most of the late and badly put in grain crops are in many cases a failure. Early and well put in crops are doing well. Beans, potatoes, corn and mustard are doing nicely. Fruits are all doing well; apricots only are a little scarce. (Paso Robles)—The weather

the past week has been unfavorable for growing crops. Peaches are badly affected with curl leaf, some trees thoroughly, but enough remain to make a fair crop of first quality.

**SANTA BARBARA (Ballard)**—Hay is being cut with a rush in anticipation of early heading season. Fruit is doing finely, but all varieties except peaches and almonds light crops.

**VENTURA (Saticoy)**—Barley has ripened very rapidly, and haying is progressing rapidly. Bean planting has begun; the acreage will be large.

**LOS ANGELES (Los Angeles)**—Warm, clear weather facilitated hay making, and was beneficial to fruits. The late rains caused but little damage to hay; the grain crop was helped by them. Hot weather is destroying the army worm.

**SAN BERNARDINO (Redlands)**—The hot wave has had a good effect on the deciduous fruit crop. Apricots are filling out nicely. There will be only about a half crop, but the quality promises to be very fine. Peaches will be a big crop. Cherries are good, and the apple crop will be large. The bountiful rains have made bee pasture abundant, and the crop will be relatively large, and the quality is super-excellent.

**RIVERSIDE (Riverside)**—Friday's hot weather caused some of the young setting oranges to drop; also affected peaches and apricots in same way.

### Why Not Test the Grade Cows?

**TO THE EDITOR:**—Many thanks to Mr. Smith for his prompt and efficient reply to my inquiry about the milk premiums at the coming State Fair, making it plain to all that the sliding scale system in regard to comparative ages and products appears to be reasonably and fairly adjusted.

Since sending my inquiry to you for the above-named explanation I have been looking up the conditions in regard to breeds, and find that competition will be confined to pedigreed stock, thus debarring some of our best cows the privilege of a public test. Would some of the breeders of this same fancy pedigree, or Herd Book stock, kindly give your readers a little light on the subject, and tell us why there should not be a class for testing grade cows, seeing that fully ninety and nine in every one hundred of our dairy cows are either grades or of mixed breeding. Then as to bulls, I suppose that fully three-fourths of all used are of the same class—without pedigrees.

Perhaps the men who breed and own thoroughbred stock think them too "aristocratic" to compete with "common cows." Then, why not do with one less class for thoroughbreds and give us one for grades? Or, again, it may be that they are afraid of being beat with cows of a "lower order" in breeding, as beat they have been, for, if I remember rightly, it was stated in the RURAL that Lady Woods, the best cow at the last State Fair, was of unknown breeding—a grade.

The RURAL has also, I think, since then called her the "world's champion," which is hardly correct. Being interested in knowing what good dairy cows can and do produce under given circumstances, I carefully keep all numbers of the paper which contain that class of practical information for future reference, studying out the main facts in each case before putting away the paper, so that I may remember what is likely to be useful in my own practice as occasion may require. One fact is, that a black Polled cow of unknown breeding gave milk that produced seven and one-half pounds of butter in two days at the London Dairy Show in 1892. I do not recollect having read of a better record than that being made at any dairy show. It is good enough. Now let the pedigreed cows of California come forward and show a better record in public test if they can. As we poor fellows, who of necessity depend on and believe in graded-up cows, are not to be given a chance to compete for premiums at the coming tests, we must be content to live and learn (?) by seeing what is to be gained by "scientific" breeding. Then, if it is proved to us that there is an advantage in it, we must, I suppose, be up and doing, as Mr. Smith says, "merely to keep up with the times, and use a little science in the breeding of dairy stock;" yet, for the life of me, I cannot see what science has to do with requiring a three, four or five-year-old cow to give more milk and butter than a two-year-old cow. Practice, without science, teaches us that. Well, I believe in science with practice, but practice first, if you please.

Mr. Smith again says that if I am "practical I shall know that," etc. Well, I am just a little practical, so much so that my butter always brings one or two cents a pound more than the highest quotations in the San Francisco market, and that for the year 1894 the average price for all I sent to that market was 26½ cents. I have the returns to show for that. It is fair to say, however, that the quantity did not vary much from one week to another throughout the year, so that I had some benefit from the times of highest prices. Then, too, I am so practical that I personally attend to such small things as are invariably linked with the duties of

A WORKING DAIRYMAN.

**SINGING** to cows was a novel topic discussed at the recent dairymen's convention, Hartford, Conn. Some one asked the question, "What is the effect of singing to a cow while she is being milked?" One member answered that his Swiss milkmen frequently sang psalm tunes and hymns while milking, and the cows seemed to enjoy it. Another remarked that cows were creatures of habit and if you must sing to them, sing the same tune to the same cow every time. Don't sing "Old Hundred" to the "Yankee Doodle" cow.



## HORTICULTURE.

## Caprification of the Smyrna Fig.

TO THE EDITOR:—Since my arrival in this part of the country I have devoted a great portion of my time to the study of some practical way for introducing the blastophaga—the insect so much desired by all the fig-growers of this country. Being myself a native of Smyrna, Turkey, I acquired much experience in the fig-growing business, but I admit that I never paid any attention to the matter there when I had full opportunities for examining and carefully studying the process of caprification.

How the pollen is carried from the male fig into the female one; how the caprifying insect works its way; how that insect lives from one season to the other and how it is reproduced and propagated! It seems to me that there are deep scientific questions which should be studied and determined before answering with a degree of certainty.

Like every one else in the fig-growing district of Asia Minor, I did not know much more about this subject than the proper time to set the male fig in a fig orchard and how it should be set. That work, which is usually done between the 15th of June and the 15th of July, consists of going up in the mountains gathering the capri figs, bringing them to the ranch, putting them on strings like beads and hanging one or two beads to every one of the fruit-bearing trees, and three times as many to every male fig tree in the orchard.

The balance of the work for the caprification and maturity of the crop is trusted to the almighty Allah. For these reasons I do not intend to comment on any one of the aforesaid scientific questions, but just to call the attention of parties interested in the fig-growing industry in California to some circumstantial points which the most learned horticulturists omitted to mention till now in their voluminous literature concerning the matter.

According to the information I received lately from my folks, now living in the vicinity of Smyrna, in the very same district where the best commercial figs are produced, and whom I charged to investigate all particulars connected with the process of pollenizing figs, I came to the conclusion that there might be two different kinds of capri fig trees.

The one is the very near evergreen wild fig tree, called by the natives the "orgnios boghadhes," and the other is the common capri fig tree, called "orgnios ashmadhes." "Ashmadhes" means hanging. The "orgnios boghadhes" tree grows naturally and in a wild manner in almost every deep ravine, on creeks and canyons' banks and in the most sheltered and protected places of the district of Aidin. The tree blossoms during the winter, and at about the first days of January the figs are large as berries of Sultana grapes.

The leaves drop very late in autumn and the new ones start very early in the spring. It only gives one crop of fruit, which never set larger than about one inch in diameter. It has the same form and appearance as the other Smyrna figs, but little darker or deeper green in color. No pollen is observed in that fig—it is usually found in the "orgnios ashmadhes" as a yellow powder near the blossom hole. That fig never matures, but it drops from the tree in spring so that at about the end of the month of May very seldom can any of this fruit be found on the trees. I have now all reasons to believe that this is the fruit which produces the blastophaga, or it is in that one where this insect is generated. I formed this opinion upon the following statement: In a close microscopical examination of quite a large number of different size of these figs, made in Smyrna at about the first days of February last by my brother, Chris Denotovich, M. D., of the faculty of Paris, it was observed that in every one of the figs is contained a single very lively insect, wingless, having the appearance of an ant with head of a sphinx, abdomen like a bee and legs haired—the whole insect of a dark or brown color, ranging in size from one-tenth to one-twelfth of an inch. The seeds in these figs were hardly developed by the time the examination was made, and that insect was found in some of them near the blossom hole, and in some of the others farther into it at about near the stem.

In the lot of figs that he examined again about the first of March he reports to me that he found quite a big change in the inside appearance of the fruit. The insects resembling ants which he observed frequently in the former month's examination had disappeared from some of them or were found dead in some others. The seeds were well developed by this time, and when cut it could be seen, even with the naked eye, that in every one of the seeds instead of an embryo there was a dark colored small insect with wings, the whole covered with fine hairs. He sent me some of the same figs here, which consignment was received the 18th of last April. I now leave the work to the authorities of science of this country, who had some of those special figs submitted to them for examination by Mr. George Roeding of Fresno, to tell about the insect seen in the seeds in place of embryo and give their opinion as to what

will be the most practical way to colonize the tree and insect in California.

To the best of my judgment, I believe that to import cuttings of that special tree and plant them in good places by setting them exactly in the same manner and way as they are growing naturally in Asia Minor presents most chances for success of the enterprise. The figs received here were as large as one inch thick and  $1\frac{1}{4}$  to  $1\frac{1}{2}$  inches long, which is the largest size which that kind of fig reaches. By the time they shipped me the package (4th of March) the capri figs, "ashmadhes," had hardly bloomed.

On the first day of last month another examination on the capri figs, "boghadhes," was made, but no material change was observed in them, except that the insect was well developed in the seeds, and in some of them the seeds had holes where the insect had escaped. At the same time my brother examined, too, some of the other capri "ashmadhes" figs, which were not larger than than berries of Muscatel grapes. He observed that they do not seem to contain any kind of insect yet. The pollen in them was hardly developed and there were no seeds yet, but flowers. I received yesterday by mail some figs of that kind, and I send you four of them to be examined. I hope you will find everything according to that statement. They are from the same which grows in the vicinity where the "boghadhes" figs grow, and which are gathered every year for the purpose of caprifying the commercial or female figs by the process already stated.

It should be well understood that while those capri figs ("ashmadhes") are gathered in the proper time they are found to contain lots of insects.

Now, how do those insects make their way into that fig, and how do they carry out the pollen into the other figs? and then what is that ant-like insect in the "boghadhes," and what connection has it with the blastophaga? These seem to me the chief questions to be solved. In the figs "orgnios ashmadhes" I send you and the wild or capri figs grown now in several orchards in California, with which I compared, I did not find any other difference except that the blossom holes of the former were larger and better developed.

It is widely known among the fig-growers of Asia Minor that when the crop of capri figs, "boghadhes," fails on account of severe weather, such as storms, frosts, drouths, etc., the "orgnios ashmadhes" are lacking of insects and the whole crop of commercial figs suffer accordingly. Fearing that this statement will become exhaustive if I extend it to give all the information I know now about this subject, I would like to state that I will cheerfully give more particulars to any party interested in the business upon request.

ANTHONY C. DENOTOVICH.

Fresno, Cal., May 5, 1895.

We shall be glad to hear further from Mr. Denotovich. The subject is of great interest.—ED. PRESS.

## The Situation in Florida.

We find in the Florida *Agriculturist*, just received, a frank statement of the situation of that State on the citrus proposition, which our readers should fully consider, as it may affect their interests:

As two months have passed since the "great disaster," we can, at least in a measure, count the cost. Before now it would have been guess work, and we must admit that even yet calculations must be largely tinted with hope to make them in the least pleasant.

The blow to the orange-growing section of Florida was almost crushing and overwhelming—the labor of years was swept away in a night and the damage and loss counted in dollars would go into the millions.

Since the February freeze the climatic conditions have been most unfavorable, the weather for a greater portion of the time being phenomenally cool and the precipitation small. These factors have retarded the growth of vegetation, and as a consequence it has been difficult to determine just the amount of injury done orange trees, and even now—two months since the freeze—the estimate is not entirely reliable. Old seedling trees are killed back to such a condition that a crop for the next season is an impossibility; and even if we have favorable winters for several years, the crop of the State will be exceedingly small for five or six years, and it may be ten years before the crop will equal that of the last season, for the reason that the budded trees heretofore furnishing a large percentage of the crop are more seriously injured than the seedlings. In cases of young trees, they are killed either to the ground or below the bud.

That thousands of acres of groves in the State will be abandoned is generally admitted. These groves range all the way in age from one to six and eight years. The owners are either disheartened or have not the means to carry on their operations, and will lose the groves and all they have put in them.

Of course, the majority of those who have groves will keep on cultivating and again bring them into bearing, but the acreage has been greatly reduced and the increase will probably not be perceptible for a decade, except perhaps in the extreme southern counties of the State. The result of this all means

limited production for many years, but a general increase as the groves regain their lost strength, until finally it may reach the point of the yield of '94-'95. It is safe to say that it will not exceed it for a quarter of a century.

Those who have groves that were bearing at the time of the freeze, and are able to keep them up until they regain what they have lost, will not be great losers eventually, perhaps, as the overproduction nightmare was frozen to death with the tree tops and will never again appear. While the groves are regaining their strength, population will increase and the demand for the choicest fruit on earth will increase with it. Systems of marketing will in the meantime be perfected, and when the trees are again in full bearing, their product in dollars and cents will be worth more than ever before.

The great question that confronts us is "What shall we do in the meantime?" Many growers had pretty well exhausted their resources in getting their groves to a bearing age.

It has been suggested that, as necessity is the mother of invention, our growers will look to other things—other crops—to fill the hungry gap. Land that heretofore was thought to be worthless for anything except orange trees will be used for ordinary field and garden crops. More gardens will be planted and more vegetables grown. Other crops, such as corn, cane, rice, potatoes, peanuts, grasses, etc., will receive a large portion of the orange grower's attention, and the State will become what it should have been all the time—self-sustaining and self-supporting.

## Peaches for Amador County.

The University of California has a branch experiment station about five miles from Jackson in Amador County, of which George H. Hansen is foreman. The Jackson *Dispatch* recently gave an account of a visit to the station, and says: The experiments with apples, peaches, figs and olives are especially instructive. Here is a peach orchard with about sixty varieties on two kinds of soil, receiving no irrigation whatever, and producing a very high quality of fruit. Statistics and memoranda were taken daily in this orchard. During the coming season the trees will be irrigated and results compared with the product obtained without irrigation. The exact amount of water used will be recorded.

Mr. Hansen, the foreman, recommends the following varieties of peach as the best six for the district: Briggs' May, Foster or Early Crawford, Elberta or Muir, Nichol's Cling, Henrietta and Garey's Hold-on. For a larger list of peaches, adapted for home orchard, he recommends the following: Alexander, Shumaker, Strawberry, Hale's Early, Tuskena Cling, Foster, Chinese Cling, Royal George, Honey Cling, Elberta, Muir, Late Crawford, Newhall, Grover Cleveland, Lemon Cling, Picquett's Late, Indian Blood, Late Admirable, Columbia, Thissel's White, Garey's Hold-on, Crimson Beauty, Salway, Wilkins' Cling, Henrietta and George's Late Cling. It will be noticed by those acquainted with Amador orchards that many of these are new and improved varieties, the pick of hundreds of peaches gathered from different parts of the United States, and it may be said in passing that in peaches, as in most other fruits, the university collection is far more extensive than that of any nursery.

## THE DAIRY.

## Alfillarilla.

TO THE EDITOR:—I was showing a friend the other day the forage plant called alfillaree (?) and he asked me if it was an annual or perennial. I thought it an annual, but was not quite sure. We dug up a root and it was so large that he thought it could not have grown to that size so early in the season. I am satisfied, now that I have seen it growing in orchards and hop yards, that it comes from seed every year. This little incident shows how careless we are to inform ourselves about things that are apparently so familiar to us. I looked in the dictionary and encyclopedia, but could get no information about the plant. I am inclined to think it a native of this State or coast; and having seen but little regarding this important plant, I do not know where to procure it. My friend had never seen it and he was desirous of gratifying his curiosity. I began to look around in my pasture for a specimen and had to hunt quite a while before I found one. Then I started to inquire about the scarcity and learned that my stock were so fond of it that they had cropped off the tops of it in preference to other, as I supposed, more desirable plants. Stock will feed on this plant in the spring in preference to anything else; it appears to be sweet and will fatten them very quickly. My friend (who is not a farmer) asked me several questions about "filaree." If it is so desirable, he asked, why not gather the seed, have it on sale and sow



fields with it? I had to tell him I never knew any one to gather the seed or sow any of it. Nature is very persistent in endeavoring to propagate this plant. It will go to seed the last part of the season before the stalk is two inches high. When the pasture is brown and dry, and nothing but dust can be seen, the animals will lap up these seeds and soon get fat on them. I never knew of alfillarilla being cut for hay, any more than which naturally grows among grass and alfalfa. It varies in growth according to the quality and condition of the land in which the seed is dropped. If any one has tried it as a crop I would like to hear from him; and I would also like to get a little more of the history of this plant, if obtainable. DANIEL FLINT.

Sacramento.

Alfillarilla (corrupted into filaree) belongs to the crane's bill or geranium family of plants. There are two species freely growing in California—*Erotium cicutarium* which is the more valuable, and *Erotium moschatum* which is a ranker grower, but has a musky flavor and is not so acceptable to stock. The term "alfillarilla" is the Spanish name of the plant. It is not a native of this coast; it came from Europe at some remote period. It is an annual, as our correspondent believes, and is one of the finest winter forage plants we have. It is sometimes cut for hay, when a good high stand is found; but its chief use is for grazing. We shall be glad to hear from all readers on their uses of the plant.

The seed of the plant is very persistent in securing a rooting, and by its form is fitted to attach itself to moving bodies and is carried great distances. It is quite a hard seed to gather and much of it is not usually found in the market. One of the San Francisco seed firms lists the seed at \$1 per pound. We should think it would be cheap at that price, judging by what it has cost us to gather small samples to send to distant correspondents.

#### Vetches.

In Bulletin No. 35 of the Oregon Agricultural Experiment Station, Prof. French gives considerable information concerning vetches, which will be of importance in our upper coast counties where these legumes will grow well.

Prof. French states that there are several species of this plant, which are found growing wild in Oregon. The variety cultivated here is the winter vetch, imported from Europe. In appearance it closely resembles the wild pea which is so abundant in the mountains of the Coast Range. It does not, however, belong to the same genus.

There is a spring vetch which is grown to some extent in the Eastern States and Canada. The winter vetch will mature here even when sown as late as April. The common practice is to sow in the fall and then the crop will be ready to begin cutting for green feed in April or May.

The plant grows best on an open, rich soil and has been grown very successfully on the red hill land of the Coast Range mountains. The soil and climatic conditions of a large part of Oregon, west of the Cascade mountains, seem to be very well adapted to its growth.

One and a half bushel of seed is required for an acre, and a quarter of a bushel of wheat should be added. The vetch makes a growth of four or five feet, and without the wheat to hold it up the vine will fall, making the harvesting a difficult matter.

Cut and fed green the vetch is valuable for all kinds of stock—cattle, horses and pigs. For dairy stock it is eaten greedily and furnishes a highly nutritive ration.

At a number of farms in the Willamette valley the vetch has been used with success for making silage. It does not keep quite so well as corn nor does it furnish so much silage per acre. At the Station farm, however, nineteen tons of vetch ensilage have been secured per acre at one cutting on good, strong soil without any special culture.

During the past season a considerable quantity of vetch hay was made at the Station farm, and the experiments to test its value as compared with clover hay are not yet complete. In appearance the hay very much resembles that made from alfalfa. The stock eat it greedily and seem to prefer it to clover hay.

If the first cutting is made early, say in May, the second crop will mature seed. In saving the seed great care must be taken, as the pods burst very easily; if they get wet and the sun dries them again, they will burst. For this reason it is best to cure in small piles.

THE waters of North America, which means the Gulf of Mexico, the two great oceans and the rivers, creeks and lakes, are stocked with 1800 different varieties of fish. Of the above number 500 are peculiar to the Pacific and about 600 to the rivers, creeks and lakes.

## THE SWINE YARD.

### The Hog in the Farm Economy.

At a recent convention in Vicksburg Prof. James Wilson of Iowa gave what may be called a progressive address on the hog, and we propose to give our readers the benefit of it. Of course Californians who live where alfalfa does well will read that plant into the discussion and thus make Prof. Wilson's admonition local. Our alfalfa is better than the plants he mentions, and, including this, will add force to his remarks:

The corn belt produces the lard hog. We turn corn into pork—mostly fat. We have developed a hog for that purpose—the Poland-China. We have not yet as a people learned to feed the cow nor the horse that the European wants, nor the sheep the Englishman prefers, but we feed ourselves well and we feed the hog well.

The Danes find the bacon hog most profitable—a very different animal from the lard hog, and feed on more nitrogenous nutrients. The people of the South will study the situation and suit the hog to his environments. The possibilities of your soil and climate present an interesting study to the student. If you have adopted a system of farming that has the pasture in it, that will produce grasses throughout the growing season, or succulent substitutes to supplement the pasture when it is deficient, you are in advance of most States of the Union, and, if you have not, this task precedes the study of the animals that are to live upon the plants.

I cannot recommend the hog as a specialty to any people. He has made more money for the people of the corn belt than any other animal, or farm department, but our people are learning that for the benefit of the land they should be auxiliary to the cow, and that she should be the center of the farm system around which all other departments should be grouped.

The cow and hog dove-tail together very fittingly. The critical time in the life of the hog is at weaning; then the cow adopts the litter and nurtures them along toward shoathood, the pasture and the finishing period. Wherever you can grow the pasture grasses and the clovers the hog will thrive. We sent South a few years ago for your cow pea, and to Japan for their bean. We have drouths that dry up pasture grasses and we wanted something that would be in bloom then, so that succulent feed might be continuous. This is one of the secrets of successful farming; the animal must have plenty of what grows on the farm during all the time of growth. Where land requires fertilizing, it is better to do it through the presence of animals by pasturing and buying grain, especially mill stuffs, than by purchasing the fertilizers of commerce. The railways connecting Iowa with the south are bringing us your cotton-seed meal just now. It is highly nitrogenous and said to be injurious to hogs, which I doubt, if it is judiciously fed; but be that as it may, it is good for the cow, and the cow is good for the farm, and the hog prospers on what the farm grows. You have a mild climate here well adapted to the hog. He suffers during winter in the north and requires great care to keep him thriving, to avoid colds, and the consequence of eating too much heating feed. We have pushed early maturity to the verge of barrenness, and the latest we hear from intensive hog feeders is, exercising the breeding herd when the weather is too severe to have them in the pasture. All this you can certainly avoid. Cold weather, spring rains and too much corn are the ills our hog flesh is heir to. It is necessary to the hog in any climate that he be protected from sudden changes of weather and from extremes of heat and cold. Profitable swine husbandry requires that growth be made cheaply. The red clover pasture does that best in the north; where that plant is not at home others must take its place. The bean and pea have served mankind as far back as history tells of him. The lentil that Leah's son found in the field was a bean or pea; the pulse that Daniel preferred to meat was a legume. Rogers tells that beans and peas were cropping plants in England in the 13th century. The whole American hemisphere requires the development of the pea and bean suited to each locality. The Canadians grow peas and feed hogs where they cannot grow corn. The Gulf States have the whippoorwill pea, that we of the North have use for at the close of our seasons.

The State of Mississippi can grow corn for finishing the hog; that is not the most difficult task the hog-grower anywhere has, however. Growing the hog is the problem—growing him so that his health and vigor and fecundity may not be impaired, so that he will resist any adverse influences of disease from feeding, weather, or improper handling that may befall him. The nearer to nature we keep the hog the more vigor and fecundity he will have, and the more we approach refinement and early maturity the less resisting power he has when disease threatens.

The hog grows cheapest on the pasture and beside the fields that grow his grains. He is most profit-

able as a subordinate department, because he cannot consume the coarse fodders of the farm. He furnishes the best market in which to sell the by-products of the mill and dairy. The hog assimilates more of most concentrated feed stuffs than any other animals of the farm. Quicker returns come from him than from horses, cattle or sheep. He pays the rents in European countries, he lifts the mortgages in the Northern States, and, in conjunction with the cow, he will redeem the worn-out cotton and tobacco fields of the south. Avoid permanent residences for the hog—move him about so that his environments may be clean and uncontaminated by germs that develop rapidly where they have suitable media. Put the pen on wheels and move the litter about the pasture, and have hurdles to confine them temporarily. They will fertilize as they go and keep healthy. Avoid close breeding, as it intensifies predisposition to disease. Select your breeders from good milkers, as this is the best indication of fecundity.

No agricultural people thrive who buy grain or meats and pay for them with the price of other farm products.

We compete now, through improved and cheapening transportation, with all the world. The farmer is most independent who finds at least sustenance for his family from his fields, flocks and herds.

## THE POULTRY YARD.

### Feeding Young Chicks.

Mrs. Flora McFadden continues her pointed talks on chicken raising in the *California Cultivator*. She holds that a chick is a chick, whether hatched by hen or incubator, and the same kind of food will do for both. Some people argue that incubator chicks are not as hardy as hen-hatched chicks, but, if the incubator and the one who runs it do their part well, one kind should be exactly as strong as the other. She proceeds:

As to kind, quantity and method of preparing food, authorities differ, and I can only give the plan which I have found works best. As indicated in a previous chapter, the first feed consists of hard-boiled egg, chopped fine, shell and all, mixed with milk-moistened breadcrumbs. The next feed is rolled oats, the kind used for breakfast mush. They soon learn to be very fond of this, fed dry. Every other day a batch of bread is baked for them after the following recipe: One part bran, one part middlings, one part cornmeal or finely ground corn. Mix either with milk or water and use baking powder to make it light; bake a half hour or so, and, before feeding, moisten enough for one meal with water or milk, preferably the latter. For the first week this is alternated with the rolled oats. When chicks are two or three days old, place in the feeding run a little trough filled with parched wheat and corn that has been parched separately and ground finely together. Keep this before them all the time. They are not particularly ravenous for this, but will eat it when hungry, and when soft feed is not at hand. The charcoal in it is excellent for them, and the parched grain has a tendency to prevent bowel trouble. After chicks are three days old, give some form of green feed every day. Onions (tops and roots) and green alfalfa chopped together are good. Angle-worms are a good substitute for meat, and the chicks are wild for them; they should have meat in some form three times a week. Where milk can be supplied in abundance, meat is not so necessary. Of course, it goes without saying that fresh water is constantly before them, and in troughs or vessels that the chicks cannot get into, or they will get wet and chilled. After the first week discontinue the rolled oats (because it is too expensive to feed longer) and in its place give cracked wheat.

Instead of feeding every two hours, I have settled down to feeding five times a day from the very first until they are three months old. If the parched grain is kept where they can have access to it, they do not suffer from hunger, but do really better than when so constantly stuffed. Times of feeding are as follows: Early in the morning, say six o'clock, then at nine, at noon, at half past two or three and then again just before the chick's bedtime. Feed liberally, but only so much as they will eat up clean. Give them plenty of sharp sand or fine gravel and plenty of exercise between meals. Of course, they will learn to eat whole wheat when only a few weeks old, and the sooner the better, making wheat and the bread the staple articles until three months old, then change the feeding three times a day until nearly full-grown, not forgetting that green food and meat, or its equivalent, are essentials to the fowl's proper development.

When the chick is very young, much depends on keeping the brooder at just the right heat. Some one has rightly said that improper brooding will destroy more chicks than any incubator can hatch. If chicks are kept too cold they will almost invariably have bowel trouble, and unless the system can be brought up to par again they will die. In this case, chilling has weakened the bird, and bowel trouble is



the outward and visible sign of this weakness. Overheating will as surely weaken and kill the birds, the symptoms being probably a dwindling away, stunted growth, and you don't see what on earth can be the matter with them; and while you are wondering, they lie down and die.

Of course, this mortality is unnecessary, taking it for granted you have a good brooder. But it is not possible to be always sure what the exact temperature should be. Watch the chicks; if they crowd, they are cold. If they spread out, they are comfortable; but if they spread out and pant or hold their bills open, they are too warm. Be very careful that the brooder is well ventilated; pure air is as necessary as pure food. Give them plenty of fresh air (no draughts), and they will stand considerable heat.

Bowel trouble seems to be the great bane of young incubator chicks, so perhaps I may be forgiven for dwelling on it at some length. Be sure it is due either to improper food or to weakness, and the weakness is generally caused by improper temperature. Sometimes when the incubator does not run well, or eggs have not been rightly managed during hatching, the chick comes from the shell weak, no matter how strong the germ might have been in the first place. In such a case, the chick is almost sure to die with bowel trouble, and it ought to, for such a chick can never be a credit to itself or its owner.

Where prostration is not too great, chicks can generally be cured by removing the cause, as when occasioned by wrong food or temperature.

Boiled rice, seasoned with a little salt and pepper, is an excellent corrective of looseness of the bowels; and if there is a tendency to costiveness, feed scalded bran.

If lice make their appearance on chicks, powder thoroughly, and repeat every two weeks until you are positively sure there is not one on the whole brood. Should head and throat lice be present, grease top of head and throat very lightly with carbolated vaseline. Do this just before they go to bed, and then see that they are kept very comfortable through the night. Grease is cooling; and unless great care is exercised just after the application, they will take cold.

Leghorns and Mediterranean breeds should begin roosting when from one to three months old, according to the state of the weather. Don't force them to any sudden change, or they will take cold—the preliminary to roup.

When chicks are a month or six weeks old, lift the top from brooder and let them simply set in the box, furnishing lamp heat enough to warm floor if they seem to need it. The largest and strongest will soon perch on side of brooder. As soon as the smaller ones can do without heat, remove the brooder entirely, putting in its place a box as near the shape and size of brooder as possible, and arrange perches above this. By following this plan, the largest chicks will soon take to the perch and the others will follow in a short time.

## TRACK AND FARM.

### The Horse Trade Improving.

Almost coincident with the increase in the horse-auction business in New York, says the *Sam*, there has been a marked falling off in arrivals in the Chicago horse market in the last few weeks, with a strong demand for the better grades of driving horses for export. Large numbers of horses have been shipped to Europe during the last month.

The substitution of cable traction or electricity for street cars throughout the country has materially limited the demand for the horses of the grade of streeters, but this has been in some measure offset by the fact that this year there has been an increased foreign demand for American horses, the three countries sending the largest orders being England, France and Mexico. In the year 1893 2967 American horses were exported to other countries. In 1894 the number so exported had risen to 5263. In view of the demoralization of business in general at the time, the increase was an important one and a similar increase from the figures of the year of 1894 is foreshadowed in 1895. In the year 1893 the number of foreign horses imported into this country was 2704. In 1894, corresponding with the increased American exportation, the number of foreign horses imported into the United States has fallen to 1512. In other words this country is steadily increasing its foreign market for American horses and, at the same time, reducing its demand for foreign horses.

The winter months and those of early spring are the most active for horse trading, and recent improvement in the business has justified the experiment of those New York commission merchants who are now maintaining a regular auction for the sale of horses. The supply and demand for horses in various countries varies sharply. Usually on flat lands or prairies, such as are found in the western part of the United States, horse-breeding can be carried on with profit, whereas in mountainous countries or those in which the population is crowded

into cities, the expense is so much increased that the supply of horses falls short of the demand.

There are in all the countries of the world in which any records exist about 75,000,000 horses. Of this number 20,000,000 are in the United States, 20,000,000 in Russia, 5,000,000 in the Argentine Republic, 3,500,000 in Germany, 3,250,000 in France, and 2,000,000 in Hungary, a country which has long furnished to European armies their best cavalry horses. The three countries in which the shortage of horses is most marked are Italy, Scotland and Portugal. The United States, as an export country for horses, has always the menace of dangerous rivalry from the Argentine Republic on the south and Canada on the north. The heavy draft horses of Canada, such as were shown at the World's Fair, take a very high rank, and the climate and geographical position of the Argentine is very favorable to the successful breeding of horses not of the highest grade. The foreign business of the Argentine, too, is largely in the hands of Europeans, and this consideration may operate to prevent, so far as these merchants can control it, the extension of the American export trade in horses, which is now steadily on the increase.

Under the Mills bill the rate of tax on horses imported into the United States was reduced materially. Under the McKinley bill horses of the value of \$15 or over paid thirty per cent ad valorem duty. Under the Wilson bill this was reduced to twenty per cent, a cut of one-third. Horses of less value than \$150 paid \$30 a head under the old law, and under the present law a tax of twenty per cent of their value.

### Sam Jones on the Trotter.

Sam Jones is called a crank by most people, but his head is level on the subject of trotting. Here is his opinion on that subject, says an exchange:

"Now, I like a thing that goes. I think Nancy Hanks is a much higher-bred animal than Sullivan or Corbett. No poor mules can get in a kick. And I will tell you one thing, that Nancy Hanks is a thing of power and beauty and speed; she is a good-made animal, and I love to see them go. I tell you to stand at the side of a race track and see a half-dozen of them prancing for the start, and watch them when the word is given, how they leap and plunge; and then see them on the homestretch, with nostrils distended, and see them on the last 100 feet, with neck to neck, and nose to nose. Why, brother! Preacher as I am, I would go you one eye on that. But I haven't seen a horse race in twenty years, and never expect to see another. Not that I don't like a thoroughbred horse, but I can't stand the dirty, scrubby little devils that stand around them. The horse is a thoroughbred, but the little fellows that do the betting are scrubs; and if you will breed up your men I will go to the horse race. They tried to get me to preach against the race horse. I said: 'I can't do it; I like them.' I said: 'You get a ranch over here in the blue grass region and you will get a colt worth \$50, but you bring up boys you can't sell three for \$1. And I will tell you, if you don't cross the breed on the people, they will run to razor-back hogs in about four more generations; the thing is going down.'"

### The Chicago Horse Market.

For the week ending Saturday, April 27, 1895, F. J. Berry & Co., Union Stock Yards, report a uniformly steady market all the week, notwithstanding the receipts have been more liberal. The tone of the trade showing an upward tendency, extra choice 1300-lb. to 1400-lb. blocks selling up to \$133.50 in Saturday's auction, being the highest prices reported this season. The general tone of the trade continues steady, with a liberal demand from all sources, the competition being sharp on all the best offerings of all grades between domestic and foreign buyers. Receipts up to Friday's closing aggregate 3050, against 2803 arrivals reported last week, and 1795 for the corresponding period in 1894, the more liberal trade stimulating the market and maintaining the firm price. The market closed firm, with favorable indications of a strong tone to the trade next week. They quote:

|                                    |                 |
|------------------------------------|-----------------|
| Expressers and heavy drafters..... | \$90 to \$210   |
| 1100-lb. to 1300-lb. chunks.....   | 75 to 125       |
| Streeters.....                     | 65 to 95        |
| Southern chucks.....               | 30 to 60        |
| Coachers and fast road horses..... | 130 to 300      |
| Ordinary drivers.....              | \$75 and upward |

These prices are for sound horses, five to eight years old, well broken and in good flesh.

## THE FIELD.

### The Grain Aphis in the San Joaquin.

Reports speak of the occurrence of grain lice this spring at some points in the San Joaquin valley, and some fields are being destroyed. Fortunately this insect does not often occur in sufficient numbers to

do great injury, but occasionally it works great damage. Where the insect does not attack the grain soon enough to prevent its heading it is not unusual for it to be wiped out by a hot dry wind, and thus prevented from doing much injury. We shall not be surprised to learn that such has been the case this year, for the parching heat of the present week has been promising in this regard.

The insect is the grain aphis (*Aphis avena*, Fabr.) It is an old pest of the grain grower, having been known in Europe from early times, and has been present on grain crops in the Eastern States for many years. Occasionally it has multiplied so rapidly that it has destroyed crops, but generally the numbers have been too few to give trouble. The insect occurs in three forms, winged females, females without wings and young lice. They are grouped on the stems compactly, much as the rose aphis collects upon the tender shoot or bud stems of the rose bushes. The insect is a near relative of the rose aphis and resembles it in many respects, both in appearance and in mode of reproduction. The best account of the insect which we have at hand is that by Dr. Fitch in his sixth New York report, and we shall take therefrom some points:

The insect has a slender, sharp-pointed bill or trunk, which it holds under its breast when it is not in use. With this it punctures the leaves and stalks of the grain and sucks their juices. It therefore has no occasion to leave the particular plant on which it is born, as, till the grain is becoming ripe and juiceless, it always has an ample store of nourishment directly at its feet. Hence it has no use for wings to carry it, like other insects, from place to place in search of food. It needs wings only to enable it to emigrate to fields of grain which are unoccupied, in order to found its colonies in them. Only a small portion of these insects, therefore, acquire wings. We frequently see young lice produced in the day time, but fewer appear to be born then than during the night. The winged ones are also much slower in coming to maturity. I placed several young lice the morning after they were born upon some grain growing in a flower pot, and on the third morning afterwards I found four little ones around each of them, showing that the wingless ones come to maturity in three days. It will thus be seen with what prodigious rapidity these creatures multiply. A single one producing four young daily, and these becoming equally prolific when they are three days old, her descendants in twenty days will number upwards of 2,000,000, and will be increasing at the rate of a million daily. This will serve to explain to us how these insects become so surprisingly numerous.

As soon as the heads protrude from their sheaths, preparatory to blooming and growing the kernels of the grain, the aphis wholly forsakes the other parts of the plant and becomes congregated upon the head, evidently because the juices which the plant elaborates for the growth of its flowers and seeds are much more nutritious, dainty and palatable to these insects than those which circulate in the leaves and stalks. They here fix themselves on the base of the chaffs which envelop the kernels, standing with their heads downward, and inserting their bills they suck out the juices which should go at first to grow the flowers and after that to fill and perfect the kernels. And now the young lice, instead of scattering themselves and traveling away, settle down closely around their parent, crowding as compactly together as they can stow themselves.

At the same time an equally remarkable change takes place in the color of these insects. So long as they nourished themselves on the coarse juices of the leaves and stalks, they were all of a grass-green color. When they came to feed on the more delicate juices of the flowers, they began to change to an orange color. One of the grass-green insects having stationed herself at the base of a kernel, next day, in the group of little ones around her, a yellow one would occur, all the others being green like their parent. A day or two later, as the nourishment she had obtained from the leaves became more dissipated from her body and replaced by that now obtained from the kernels, half the young she produced would be of this yellow color; and still later all the young would be yellow, no green ones being afterwards born.

Such are some of the interesting points in the operations of this insect. It is not fully known what conditions favor its growth, nor is it possible to suggest any remedy which would be practicable to apply to growing grain. The insect carries itself from one year to another by means of eggs, which are deposited late in the season on the grain and probably upon plants bordering the field and hatched out by the warmth of the following spring. If attacked crops are not plowed up, but harvested, a precautionary measure would be to burn off the stubble, but if this is not generally done there would be enough eggs left to populate all the grain fields if the conditions should be favorable to the growth of the insects. That these conditions are not generally favorable is shown by the fact that an insect with such mighty reproductive power but seldom becomes a scourge. Whether these conditions are vested in meteorology or in the increase of the insect enemies of the aphis, of which there are many, has not been determined so far as we know.



## THE HOME CIRCLE.

## Hard Lines.

It's hard to live a saint on whey,  
When sinners drink the cream;  
It's hard to be a middlin' man,  
When a great man ye might seem;

It's hard to lift your hat to him  
Ye ken to be a rogue;  
It's hard to gie a doonrich "no"  
To what is maist in vogue.

It's hard to speak the truth when lies  
Would earn you power and place;  
When Providence gies scanty fare  
To say a hearty grace.

It's hard to be an honest man  
When rascals rule the roast;  
It's hard to make self-sacrifice,  
And yet make no boast.

It's hard to hear long-winded men  
Hold forth your own conviction,  
And not in sheer disgust at last  
To give it contradiction.

It's hard to see mere money-bags  
Take precedence of brains;  
To find broadcloth will win a place  
That broad sense never gains.

It's hard to hear some preachers ban  
'Gainst worldliness and wine,  
When a' the time, ye brawly ken,  
They're o' anither min'.

It's hard to be a man at a',  
An' waur to be a woman,  
But things will maybe tak' a turn,  
So better days are comin'.

—Rev. John Legge, in Current Literature.

## Two Rooms.

A beautiful room with tinted walls,  
A bust where the colored sunlight falls,  
A lace-hung bed with a satin fold,  
A lovely room, all blue and gold—  
And weariness.

A quaint old room, with rafters bare,  
A low white bed, a rocking-chair,  
A book, a stalk where a flower had been,  
An open door, and all within  
Peace and content.

—Anna J. Grannis.

## Sue.

"Hello, Billy Freeman!" shouted Campbell Kerr.

"Hello, Sissy Kerr!" said Sue Freeman.

"Got on your boots, Bill?" said Campbell.

"Yes, I have. You got your humps on, Came'l?" said Sue.

Campbell, who was one of a half-dozen boys rollicking on a float in their bathing suits, clapped his hands on his knees and laughed. Sue, who was sitting on a bench at the end of a long pier with one hand on Gerald Sawdey's baby carriage, gazed down at the float with snapping, resentful, defiant eyes.

Sue always did have one hand and one eye on Gerald Sawdey; that was her business. She had lived with the Sawdeys, and washed dishes and tended the Sawdey babies since her mother had died, four years ago, when she was nine years old. Gerald was sixteen months old, and very fat, very backward and terribly uninteresting; but Sue poured her troubles into his ears, because in all the world she had no other confidant.

"He's the hatefulest boy in Sea Cliff!" she said to him now, hotly, under her breath. "Or in New York, where he came from. 'Bill Freeman!' That's because I wear these great big old shoes of Tom's. I can't help it; your mother makes me. I never have any new shoes. I have to wear out Tom's old ones. And that Campbell Kerr calls me 'Bill Freeman,' and 'Boots.' He thinks he's smart because he boards at the Sea Cliff house, and his folks are rich, and he has everything he wants. He thinks he's good looking, too, with his curly hair and his white duck suit and his yellow shoes, and his gold watch, and his dog, and his pony cart, and his bicycle. He's been pestering me all summer. If I was rich like those girls at the Sea Cliff house he wouldn't dare to; he's sweet as molasses to them. They're always around when he hollers things at me, and when I holler back they look at me as if they thought I was a mean, rough, hateful thing. Maybe I am. I don't care. I'm going to holler back every single time. They'd look at me just the same if I didn't, I s'pose—a girl that wears boys' shoes and tends a baby and lives

down on Third street, next to a barber shop. I wouldn't come down to the shore at all—I'd stay where they wouldn't ever see me—but your mother thinks it the best place to wheel you. I hate it! And I hate him!"

Gerald stared at her vacantly and unfeelingly. He never said anything, not even goo. He was eating a piece of bread smeared with syrup, and his fat face and hands and his pillow and the carriage robe were dirty and sticky and crummy.

One by one the boys dived from the float. Campbell Kerr swam several yards under water, coming up in unexpected places. Then he floated and swam with the side stroke and trod water.

She watched him. She breathed a little faster; her red lip pushed itself up. "He thinks he's the best swimmer anywhere round," she thought. "Tom Sawdey's better, and I've beaten Tom Sawdey twice in a race, and Mr. McFarlan said I'm the best girl swimmer he ever saw, and I'd ought to have a medal. I could beat him easy enough." She eyed Campbell Kerr's dark, curly head and ruddy face, bobbing around on the water. "And wouldn't I just like to."

A group of young girls came down to the pier and stood near Sue and the baby carriage, chattering and waving their hands to the boys in the water. They were the girls at the Sea Cliff house: the girls who gazed in polite astonishment at Sue when she made her pert retort to Campbell Kerr's hectorings.

"Who got it up," said a girl in a white sailor hat.

"Ralph Dewing's father," the black-eyed girl in the blue shirt-waist answered, "and Mr. Kerr and Mr. Belding and papa took it up. Everybody at the hotel has contributed and the prizes are lovely. A solid gold watch charm in the shape of a star with a little diamond in it for the first prize."

"Campbell Kerr will get it," said the girl with the lace parasol.

"Of course," said all the half-dozen in different keys, and with utter conviction.

"And his father has promised him \$25 besides, if he wins the race," said somebody.

"If? He'll win it," said the black-eyed girl.

"But there are three more prizes; gold cuff-buttons and a gold pencil, and a silver photograph frame. All things that would do for either a boy or a girl, you see, and I think one of us girls might come in fourth."

"Or second," said the girl with the parasol, boldly. "We can swim a little, I guess! And only a 200-yard course. From here to the boat-landing and back, isn't it?"

"From that boat here, around the buoy at the boat-landing and back," the girl in the sailor hat replied, with exactitude. "Thursday morning at 11 o'clock. Boys or girls over 16 not eligible."

The noon whistles were blowing; it was time Sue took Gerald home. There was a sudden brightening in her eyes and a smile on her lips. She pushed Gerald's buggy up the pier, up the winding path to the bluff, and straight up to the vast and elegant Sea Cliff house.

Some gentlemen and ladies were grouped on the broad piazza. She mounted the steps, not shyly, she was too eager for that.

"The swimming match," she said breathlessly, "is it just only for the boys and girls here at the hotel?"

They all looked at her and Gerald Sawdey. "Do you want to compete?" said one of the gentlemen, faintly smiling.

"If you please," said Sue. Her face was a glowing interrogation point.

"Well," said the gentleman, "it was planned for—"

"Oh, well," said another, who was smiling, too, "that's all right. You are under 16."

"I'm 13," said Sue.

"Let her compete, by all means," said a lady, quickly and cordially. She had a look and a voice which told Sue at once that she was Campbell Kerr's

mother. "You are quite welcome, too, my girl."

"Thank you," said Sue. She walked away behind Gerald's buggy with a buoyant tread. She did not see the fashionable strollers she met, nor the broad, blue bay, with its white sails. She saw only a black head and a striped bathing suit on the shore away below.

What should she do with a gold star with a diamond in it? She did not know—but she did not care. That was not the point. "I'll do it," she said to Gerald. "I will! He shan't get that first prize, nor the \$25 from his father, either. And he won't call me Bill Freeman nor Boots quite so much after that, I guess."

By 10:30 on Thursday morning the beach had a lively appearance. It was dotted thick with waiting people under gay parasols or masculine umbrellas. Carriages were drawn up on the crown of the bluff. The pier was full. There was even a reporter industriously flitting from one person to another with his book and pencil.

"If it was anything but swimming, you know," Campbell Kerr said to a companion, "I'd be rattled." He stood on the pier among the boys who were to swim in the race. The five or six girls who dared compete with them were coming out of their bath-houses one by one, and very nervous.

"Who's that?" said Campbell Kerr, eyeing the last of them, who walked down the pier slowly and calmly.

Sue Freeman, in a hired bathing suit of gray flannel, with neat black stockings and a polka-dotted handkerchief wound jauntily round her head, was a different being from the shabby little nursemaid in a patched dress and boy's shoes. Campbell stared for a full minute.

"Hello! It's Bill!" he sung out in amazement and hilarity. "Oh, Boots! You going to race?"

"Yes, I'm going to race, Sissy Kerr," Sue retorted, distinctly. The boys laughed. Campbell laughed, too; but he looked her over. Something in her face, with its tightly-closed lips and keen eyes, gave him an odd thrill of misgiving which exasperated him. And a warlike glance flashed between them.

Sue stepped out on the float, and sat down with her arms locked over her knees. "They can fuss around and talk and tire themselves all out if they want to," she thought, shrewdly. "I know better."

One by one the contestants joined her. Altogether there were 14. They watched anxiously some gentlemen standing together half way down the pier—the judges. Nobody spoke. They were all breathlessly intent. One of the judges made a motion, and the swimmers ranged themselves at the edge of the float. Then a pistol shot sounded, and echoed from the water again and again—and the swimmers dived, and struck out as they rose. The race was begun.

Sue's stroke was long, even, and not too rapid. "As pretty a stroke as I ever saw," Mr. McFarlan had said, the second time she had beaten Tom Sawdey, "and the best for a race."

All the boys shot ahead of her for a brief space; but she gained on them speedily. Thirty yards—50; half the distance to the boat landing. All the girls but herself were behind distinctly. Campbell Kerr was a few yards ahead, and she and three of the other boys were almost neck and neck. "I've got to work now," she said to herself. She was taking the rapid side stroke, and she threw more strength into it now. Twenty yards more, and she had left all but Campbell Kerr behind her.

"Look at her," one of the boys shouted, in amazement; and another called after her angrily, "This race wasn't for professionals!" She did not hear them, nor the shouts of the people on shore. She saw nothing but the wet, black head before her, which never turned for a look nor swerved from its course, but shot swiftly straight ahead.

She shut her teeth hard. Every nerve in her body was thrilled with a grim determination. Another moment and Campbell Kerr reached the buoy, tossing up a hand to signal the event.

She was at his side; they swam round the buoy and started on the home course. They were even.

The boy threw a look at her. She caught it. There was mortification in the look, and apprehension, and determination as fierce as her own. He was rather white. Sue felt a throb of triumph; he was giving out. And she was not even tired. "I'll come in 'way ahead of him!" she thought.

"It's a girl!" the spectators were saying, and they shouted and hurraed and waved their handkerchiefs. She heard it vaguely. She cared little for their applause; she cared nothing for the prize. She wanted to beat Campbell Kerr, and every muscle was strained to it.

Suddenly a strange thing occurred. She cast a look in the boy's direction to see if she was gaining on him. He had disappeared. The water lay smooth where his dark head should have been. And somebody on the beach shrieked.

Sue gasped. She wheeled about. As she did so, she saw Campbell Kerr's white face rise above the water. He threw up his arms wildly, then sunk straight down like a leaden weight.

Sue's heart gave a great leap which left her rather weak. For an instant she felt paralyzed. Then, with two frantic strokes she gained the spot where her rival had risen. "It'll be the second time!" she thought with a horror of realization, and she could not draw a breath. Would he never come up again? Yes—within two yards of her; and with a desperate plunge and clutch she caught him by the neck, and then tightly by the arm.

He was blue-white and unconscious. "A cramp," Sue thought, in a panic, "and he's been down twice." She turned him on his back, and put her left hand under his rigid form, and struck out for the shore with her right.

She swam desperately. The boys, who were behind her, swam after her, but she reached the shore before them. A score of hands lifted the boy. People were rushing down the bank with blankets and bottles. Sue saw his mother's anguished face. Some of the women were crying; some of them were grasping Sue's hands and talking to her. "He had a cramp," she stammered. She was confused, and anxious to escape.

"He's coming around," she heard somebody say, and she pressed forward till she had got a good look at him with her own eyes, and then she gave herself a watery shake, broke away from detaining hands and darted through the throng and fled down to her bath-house.

She sat for awhile huddled together on the narrow board seat, shivering and dripping. She did not seem to be the girl who had set out to beat Campbell Kerr in the swimming match and humiliate him before his mates and everybody, and carry off the prize over his abased head. She felt no grudge against him now. She had saved him from drowning, and she was glad—joyfully glad—that she had. She threw her wet arm over her knees and laid her face on it and cried.

She was wheeling Gerald up and down the street next morning, and

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picking up the molasses-spread cookies as he dropped them out of the buggy, when a yellow dogcart dashed around the corner and brought up opposite her, and Campbell Kerr jumped out of it.

"Hello!" he said.

"Hello!" said Sue, with a gasp.

He raised his hat and smiled at her brightly. "Here," he said. He held out a tiny box.

Sue opened it. A gold star, with a diamond glittering in it, lay on a bed of pink cotton.

"What is it?" she faltered.

"Why, the prize," said Campbell Kerr; "the first prize."

"I didn't win it," said Sue.

"Everybody wants you to have it," said the boy. "All the fellows and the girls, and everybody at the hotel, and—well—the whole Sea Cliff, I guess. Say, do you know it's all in the Sea Cliff *Herald* this morning? 'Brave Rescue,' and so on. Half a column. Wasn't I a duffer? I knew I hadn't any business to go in; I had a cold. Served me right. I got the second prize, though"—he showed her the gold buttons in his cuffs—"and Lon Fleming and Charley Paine took third and fourth."

"I don't want it," said Sue. "I don't deserve it, either. I did it just to be mean and hateful. I——" She hoped she was not going to cry again. She felt rather strange.

"I knew you did," said Campbell, faintly grinning. "I've got an invitation for you. From my mother. She wants you to come over and see her, and stay to lunch; she told me to bring you home with me."

"To—to the Cliff House?" said Sue, blankly.

"Yes. Why not? She won't make a great fuss and rumpus over you; she knows better."

She looked down at her dress—at her shoes.

"Oh, never mind that," said Campbell hastily. "Come right along. Take the baby in and tell them you've got an engagement you can't get out of."

There was no help for it. She took Gerald in, got leave of absence from astonished Mrs. Sawdey, brushed her hair and tied an old pink ribbon in it, with hands that fluttered, and drove off with Campbell Kerr in his trim cart; and the Sawdey's neighbors gazed open mouthed after them.

She told Gerald all about it, in a long, excited whisper, when she put him to sleep that night; and anybody but Gerald would have been impressed by the magnificence of the details. "And oh, Gerald," she ended, "he said he was sorry he'd called me Bill Freeman and Boots, and I told him I wished I hadn't called him Sissy Kerr. He ain't a bit mean when you get to know him. And his mother—she's beautiful. And the ice-cream for dinner, and everything! And they asked me to come again."

She went again, and yet again. She grew to be a very good friend of the Kerr's. And one day Campbell's mother had a talk with him, standing with her arm over his tall shoulders.

"We shall be going home in ten days," she said, "and I want to consult you. What do you think about little Sue Freeman?"

"Think about her? I think she's a gilt-edged brick," said Campbell, promptly.

"Then I will tell you my idea," said his mother, "your father's and mine. She saved your life, and we shall never forget it. She is a bright girl, and a warm-hearted girl, and promising. And it is a hard fate for her to be working for a poor living in an ignorant family, without education or influences, or a real friend in the world."

"You know we are well able to take care of a dozen children, if we only had them. What would you say, my boy, if we proposed to take Sue away from the Sawdeys, and place her in some good school for girls, and see to it that she is well educated, and befriended, and that the best that is in her is brought out, and that she is given a good chance for herself?"

"I should say yes!" Campbell almost shouted, and his mother kissed him.

### Suffering Armenia.

An earnest effort is being made in England to arouse a sentiment that will compel the British Government to interpose its power in behalf of the outraged Christians of Turkish Armenia. Perhaps the most eloquent pen engaged in this work is that of Wm. Morris, the English poet, who recently put forth the following stirring lines:

What profits it, O England, to prevail  
In camp and mart and council, and bestrew  
With sovereign argosies the subject blue,  
And wrest thy tribute from each golden gale,  
If, in thy strongholds, thou canst hear the  
    wall  
Of maidens martyred by the turbaned crew,  
Whose tenderest mercy was the sword that  
    slew,  
And lift no hand to wield the purging flail?  
We deemed of old thou heldst a charge from  
    Him  
Who watches, girdled by his seraphim,  
To smite the wronger with thy destined rod.  
Wait'st thou his sign? Enough, the sleep-  
    less cry  
Of virgin souls for vengeance, and on high  
The gathering blackness of the frown of God!

### Fashion Notes.

Neck trimmings are very voluminous. A ruche of black double tulle is much used. They are also made of several rows of plaited ruche, and in each plait the corolla of an artificial flower detached from its stem.

As trimming for dress bodies, what will be most worn will be a large, hollow plait in the center of the corsage or blouse.

Capes will be, to a great extent, made of silk, studded all over with spangles, separated from each other by arabesque figures embroidered in pearls or jet. They are also made entirely covered with large spangles overlapping each other like scales on a fish, but these are necessarily very heavy.

Black lace embroidered with real straw is now used for trimming hats and bonnets. These embroideries, which give the impression of pale gold color, are extremely effective.

The capote form of bonnet is going out. The toque shape, which greatly resembles it, has taken its place.

Fancy delaines come in delicate shades of green, mauve and pink, overlaid with a fine network of silk and dotted over with tiny sprigs.

Dressing sacques are made loose with wide sleeves, and are, as a rule, without collars.

Besides crepon, which is a favorite material, many of the new dressy house gowns are shown in figured delaines and challies, and any number of dainty plain and spotted wools that seem to have no name at all. Lace trims them profusely; and with the solid tones, taffeta ribbons in flowered and striped designs come into effective play for belts, collars and bows.

### Japanese Proverbs.

The ignorant are never defeated in any argument.

Doubting minds will ever bring a swarm of demons.

A woman with a three-inch tongue can slay a giant.

Everybody has eight eyes for his neighbor's business.

With a mote in the eye one cannot see the Himalayas.

Patience is the rope of advancement in all lines of life.

Genius hears one individual and then comprehends ten.

Negligence looks at the battlefield, then makes its arrows.

When the sense of shame is lost, advancement ceases.

A woman without jealousy is like a ball without elasticity.

The fish which escapes from the hook seems always the largest.

Who steals goods is called a thief; who steals dominions, a ruler.

Seeking information is a moment's shame, but not to learn is surely a lasting shame.

### Gems of Thought.

Good manners is the art of making those people easy with whom we converse.—Swift.

Self denial is a kind of holy association with God, and, by making you his partner, interests you in all his happiness.—Boyle.

Nothing is more silly than the pleasure some people take in "speaking their minds." A man of this make will say a rude thing for the mere pleasure of saying it, when an opposite behavior, full as innocent, might have preserved his friend or made his fortune.—Sir R. Steele.

Nothing is plainer than that beliefs, when intensely conceived, really taken into the heart, do affect character mightily. It is a common saying that a man is good in spite of his creed. This is impossible. No man is good, nor can be, in spite of his creed, his real creed. He may be good notwithstanding what he assents to, but he cannot be a good man in spite of what truly he believes and conceives in his soul.—J. V. Blake.

The nation which indulges towards another an habitual hatred or an habitual fondness is in some degree a slave. It is a slave to its animosity or to its affection, either of which is sufficient to lead it astray from its duty and its interest. Antipathy in one nation against another disposes each more readily to offer insult and injury, to lay hold of slight causes of umbrage, and to be haughty and intractable when accidental or trifling occasions of dispute occur. Hence frequent collisions, obstinate, envenomed and bloody contests. So, likewise, a passionate attachment of one nation for another produces a variety of evils. Sympathy for the favorite nation, facilitating the illusion of an imaginary common interest, in cases where no real common interest exists, and infusing into one the enmities of the other, betrays the former into a participation in the quarrels and wars of the latter, without adequate inducement or justification. It leads also to concessions to the favorite nation of privileges denied to others, which is apt doubly to injure the nation making the concessions, by unnecessarily parting with what ought to have been retained; and by exciting jealousy, ill will, and a disposition to retaliate, in the parties from whom equal privileges are withheld.—Washington.

### Bits of Fun.

Mrs. Smith—I declare! This leg of mutton has shrunk away almost to nothing. Willie Smith—Perhaps, mamma, it came off the same sheep as my flannels did.—*Pearson's Weekly*.

Barber—Would you like a bottle of our hair-restorer? Customer—No, thank you; I prefer to remain bald-headed. Barber—Then our hair-restorer is just the thing you want, sir.—*Chicago Mail*.

"I had a long argument with Jinx this morning," said the controversial man, "and I convinced him." "So he told me." "Ha! He acknowledged it to you, did he?" "Yes. He said he'd rather be convinced than talked to death, any day."—*Washington Star*.

"The first thing you want to git into your head as soon as the swelling has gone down," said the bald-headed philosopher to the newly elected young man, "is that your election didn't happen so much from a desire of the people to get you in as from a desire to get the other fellow out."—*Indianapolis Journal*.

## DOMESTIC ECONOMY.

### Domestic Hints.

**MACAROONS.**—One-quarter of a pound of almonds blanched, dried and pounded to a paste with two teaspoonfuls of rose water. Beat together the whites of three eggs and half a cup of powdered sugar, adding the sugar a little at a time. Then add the pounded almonds and mix thoroughly. Drop on greased paper some distance apart and cook slowly.

**TOMATO SOUP.**—put into a stewpan one quart can of tomatoes and one pint of cold water. In a frying pan put one tablespoonful each of butter and sugar, and when brown add one large onion cut fine and a tablespoonful of chopped parsley. When the onion is colored stir in a tablespoonful of flour, add all to the tomatoes with a teaspoonful of salt and a dash of red pepper. Boil all together slowly for half an hour. Strain and serve with croutons of bread.

**STIRRED EGGS.**—Five eggs, five tablespoonfuls of cream or milk, a piece of butter about the size of a large butternut, one-half a teaspoonful of grated onion, a heaping teaspoonful of minced parsley; salt and pepper to taste. Beat up the yolks and the whites together; add the milk. Put the butter into a small saucepan, and when hot add the onion and parsley, salt and pepper, then the eggs. Stir constantly until the eggs set, which will be in two or three minutes. Serve immediately.

**STEAMED APPLE PUDDING.**—For the crust, take about three cups of flour, one-half teaspoonful of salt, one-half teacup of lard, two small teaspoonfuls of baking powder. Enough milk to make a biscuit dough. Mix, and roll out about an inch thick. With this line a melon pudding mold, reserving a piece for the cover. Pare and slice a dozen sour apples. Half fill the mold with apples, then sprinkle with sugar, cinnamon and butter to taste. Now cover with the remaining crust, marking with a fork to connect the crusts. Put on tin cover tightly, and steam in water, not quite up to cover, three hours.

### Hints to Housekeepers.

Tack little rows of cotton batting, covered with a dark cloth, under the rear ends of the rockers of the chair that makes a practice of "tipping over."

Wash teapots thoroughly with strong soda and water, and then rinse well and dry perfectly each day to prevent the curious hay-like smell often noticed in a teapot.

In order to remove a glass stopper from a bottle heat the neck by holding over it a lighted match or by pouring hot water over it.

It is well to boil the molasses to be used for gingerbread, or at least heat it very hot before beating up the cake, and it will be greatly improved.

The best kind of a laundry apron is made of rubber cloth or of blue or brown denim. The former is to be preferred, because it protects the dress best against a wetting. Some one suggested a desirable out-of-door wrap for the house worker not long ago to be made large and loose in jacket shape, with very big sleeves and a hood attached. This can be slipped over the dress when there are windows to wash, clothes to be hung on the line or any other out-of-door service to be done in cold or chilly weather.

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## Patrons of Husbandry.

### Tulare Grange.

Something About the Rise and Fall of the Grange in Stanislaus.

Tulare Grange met at its hall on Saturday, the 4th, at 2 p. m.

Bro. Styles read a paper on the "Rise and Fall of Stanislaus Grange, No. 4," of which the brother had at one time been the secretary.

Stanislaus Grange, No. 4, P. of H., Cal., was organized in April, 1873. As its number will show, it was one of the very first Granges organized in California, and at one time had a membership of 175. C. J. Cressey, an enthusiastic Patron up to his death, first became a Patron as a member of Stanislaus Grange; J. D. Spencer, afterwards clerk of the Supreme Court of California, and Vitel E. Banks, afterwards in the Legislature, were members. It is strange some of those brothers do not do something to revive Grange membership and Grange work in old Stanislaus county. At one time there were seven Granges in Stanislaus county. By 1879 the last one of them had died out. Ceres Grange was the last to die; Stanislaus next to the last.

The history of Stanislaus Grange is the history of a great many Granges. At the time of organizing the Order in California, the farmers had great hopes of its doing something for them and nearly every farmer in the State joined the Order. It began with much enthusiasm; it was very popular. Grangers' stores for buying and selling were started; Grangers' insurance companies—life and fire—Grangers' banks and warehouses and shipping agencies were all started. In the management of these enterprises many inexperienced or inefficient agents were employed, and as a result the investments failed. The life and fire insurance companies—a business requiring much technical knowledge of detail, as well as care and judgment in taking risks—were about the first to go under. Then came the disastrous failure of Morgan Sons, an English shipping firm, who undertook to ship farmers' wheat for farmers and make advances on it to them. This failure was a blow to the Order from which it has not yet recovered. From that time on, farmers seemed to lose interest in their Order. They were too sanguine at first. They affiliated with the Order seemingly with an impression that that was all that was necessary on their part for them to do; the Order would in some miraculous way do the rest, whatever that was, for them. The Order has done much for them, but I am sorry to say that too many farmers do not appreciate their own duty to assist the Order in its efforts to assist and build up the farmer.

Many of the Grange enterprises, which have been conducted on business methods by capable men, have been of marked advantage to farmers, as the Farmers' Union of Stockton and the Farmers' Union of San Jose. The Grangers' Business Association and the Grangers' Bank of San Francisco have been, and are now, both successful and very useful institutions to the farmers.

In Stanislaus county the grangers organized and built grain warehouses for storing their grain, and as a result warehouse charges were reduced, from two dollars per ton then to seventy-five cents now, for the season's storage. At that time, too, it was the custom of the warehouse man, after the grain had increased in weight by absorbing from the winter's moisture, to weigh out the exact number of pounds put in during the heat of summer and keep the rest. Now the farmer gets his pile, the difference in weight going a long way towards paying expense of storage. In the reduction of county government expenses, too, the Grange has left its beneficial effects in Stanislaus county. Stanislaus county has about the same amount of wealth and population that Tulare county has, the assessed value of each county for 1894 being about \$16,000,000. Stanislaus is out of debt and Tulare only owes about \$17,000, yet

taxes for county government in Stanislaus are 20 cents on the \$100 lower than they are in Tulare, or a difference of \$32,000 a year. This shows, I think, the Grange has done some good.

If there are no rights or benefits without corresponding duties, have not we as farmers our corresponding duties to the Grange? Individual exertion and enterprise will do much, but it can never equal co-operation and united effort. Do we not then owe ourselves the duty of co-operating with the Grange, giving ourselves and the Grange the prestige and benefit of the union? It is not just or right for the farmer to say "I do not see that the Grange does me any good." It does do all good, the non-members as well as the members, and the non-members who get the benefit are getting that for which they are giving no consideration, something which no right thinking man will accept. Not many will take this view of it. Not many are asked to look at it from this point of view, and yet if it was properly presented to them from this point of view and kept before them in the light of a duty, very many more, I fully believe, would be good and zealous members of our Order. The members of Tulare Grange take this view of it: they will always be found ready to do their duty to their Order, their fellow man and themselves.

It was announced by Bro. A. Woods that a meeting of farmers and farm hands would be held in Tulare on Saturday, the 11th, to fix upon a rate of wages to be paid for harvest hands during the coming harvest. The Grange held a conversational consideration of the subject and appointed a committee of three to attend. It seemed to be the general opinion of the Grange that \$20 per month and board for farm labor is all farmers can pay, except for harvest hands; that the system of paying high wages for short jobs and requiring the farm hands to sleep in the hay or the wagon is not profitable to the employer and is demoralizing to the men; and that a better class of labor would be encouraged, better work had at lower wages and steadier employment, giving the men more cleanly, comfortable quarters to sleep in.

At the next meeting of Tulare Grange, Bro. Zumwalt will read a paper on "The Dairy; how to select a good cow; feed and care; cost of keeping; income per cow; net profit."

The Grange adjourned, all feeling that they had a pleasant and profitable time. J. T.

### Concerning the Proposed Summer Meeting.

TO THE EDITOR:—I note Brother Ohleyer's suggestion that a seaside camp would be better than our proposed mountain camp, and the concurrent suggestion of the RURAL that while Highland Grange, as the originator of the idea, is entitled to the first hearing, "there is no obligation to go there."

Now, please don't drift away from our modest little notion of organizing the farmers of our vicinity who habitually camp or board in our mountains and who can all, if they wish, drive to our camp and enjoy a very cheap outing. We can do this, and do it this year. If San Jose Grange, which has approved the plan, accepts the leadership and control that will please us very much; if it does not see its way clear to do so, we propose to ask the Executive Committee to appoint a committee from one of our neighboring counties to take charge of the educational features in behalf of the Order, and we will do the rest with such aid as we can get.

The seaside would be better for the interior farmers, but the attendance from the interior would be limited to the few who can afford to take such a trip with their families, supplemented by the—I trust—fewer who leave their families to broil while they go off and have fun. I suggest to Bro. Ohleyer that the Sutter county district will get

more of the class who need and seldom get the change if they will start a camp at some point in the Sierras, high enough to reach the cool air. A State camp which, except as to those living in the vicinity of its location, would be mostly for the well-to-do might properly be at the seaside. But no one has proposed a State camp. We have marked out a little thing which we can do and which may very likely grow into something very much larger; proposal for more ambitious projects I fear would end in mere talk. Our Grange is young and still small, although with excellent prospects, and having in this movement the undivided and hearty support of our community, so that we can do a great deal to make it pleasant for visitors from a distance, of whom of course there will be some. And speaking of our community as distinct from the Grange, it must never be forgotten that while the Grange, as the organized body of farmers, is the proper body to lead and control the movement, the great body of attendants must come from without the Grange, as the Granges alone are not numerically strong enough to supply them. San Jose Grange, strong as it is, does not, I presume, represent over 100 families out of the thousands of farmers' families in Santa Clara county; our proposal is for a farmers' encampment, conducted by the Grange. I think it a good way to build up the Grange, to have it actually accomplish useful things.

One thing more: Bro. Ohleyer objects to a location four miles from the railroad. Now, as I stated in a former letter, we cannot, in the Santa Cruz mountains, get a location with the distinctive mountain advantage of elevation and consequent change of air any nearer to the railroad, for the railroad does not go over the high ridges; and while this fact must be accepted, I am going to put it as a positive advantage in insuring freedom from the lawless Sunday excursions which are often an actual pest to any inhabited district which they visit, and wholly out of touch with the sober and thoughtful people whom we hope to attract. The proposed situation is entirely convenient to those real campers who come with their teams, and not at all inaccessible to even casual visitors, as Bro. Ohleyer will discover if he will visit us any day without notice, for he will find at the station plenty of competing busses ready to take him right to the locality, which has a large and well established summer business. We have as many trains as Pacific Grove has, and the buss fare, if the camp is established, will be half a dollar, which will deter no one who could otherwise come.

In conclusion, I have to say simply that we are a plucky little Grange, striving to build ourselves up in the estimation of our own community by actually going to work and accomplishing a thing of great public utility which incidentally brings our own beautiful neighborhood into the better knowledge of mankind. We desire some Grange other than our own to assume the actual leadership and take the glory, while we necessarily, being on the spot, do most of the hard work. Failing in that, we will take charge of everything, asking only that the State Grange give its official sanction by appointment of a proper committee to work with the University faculties in arranging the educational features. We expect to begin small and grow large, and we respectfully ask for the moral support of the Order and its official sanction and direction of the educational work, and we hope our example will be followed by other localities, arranging only that the periods of lectures do not conflict.

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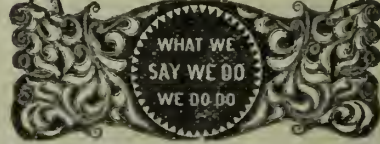
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**Wind Power Water Supply.**

The phases this matter assumes on the great plains of the interior are of interest to Californians, and may in some cases be suggestive of local applications. In commenting on the subject, "Irrigation by Wind Power in the West," the Louisiana *Planter* remarks that there is there a vast, nearly level, plain, with not a wind break from the North Pole to the Gulf, with but little wood or coal, with considerable, but not sufficient rainfall, with fertile soil and a necessity for elevating water for irrigation. Clearly, there is need there for a cheap, simple, effective invention for elevating water.

The State of Kansas has appropriated \$30,000 for experiments in irrigation. Everywhere in western Kansas may be seen windmills of primitive form, horizontal, vertical or vertical geared. Holland has 12,000 windmills, which average eight-horse power, used to drain the polders. The States of the plains will soon, apparently, have more than that number used to irrigate the prairies. Steam pumps, gas engines, hydraulic rams and pumps driven by animal power and all of the known devices for elevating water are now finding experimental tests in Kansas. It is probable that valuable data in regard to comparative cost and efficiency of these different motors will be obtained from these experimental tests.

The work of elevating water for irrigation is very old. Singularly, arid countries in ancient and in modern times have sustained dense populations. It might naturally be supposed that methods for elevating water, having been used so long, would now be little susceptible of improvement. It is, however, quite possible that an improvement is possible in this age which would not have been so in other ages, or likely in other countries than the States of the plains.

A crude invention, which is called "The Jumbo" wind engine, appeared in western Kansas about ten years ago and is now coming into extensive use. Its ease of construction, economy in cost, capacity, in power and simplicity seem to recommend it to those who observe its work. It resembles the paddle wheel of a stern-wheel boat, with a shaft twelve or fourteen feet long, a diameter of twelve or sixteen feet, and has six or eight radial arms. The lower half of this horizontal wheel is shielded from the wind, so that the air acts only upon the upper vanes. A crank upon one end of the shaft connects with a pump. Its power can be indefinitely increased at any time by increasing its length, which can be done by any one who is handy with tools. It is said that a "Jumbo" giving 100-horse power in a fifteen-mile wind can be put up at a cost of \$500. The wind acts upon this sort of paddle wheel from all points of the compass, except two. It seems to require no "governor," but simply pumps more during a storm. No tower is required, and it is placed so that the radial arms will be clear of the ground. In fact, in Kansas, where there are few trees and no hills, it is claimed that the wind currents have greater force at the surface than high in air.

Perhaps in this crude device for raising water for irrigation in a wind-swept country there is the germ of an idea which, when fully developed and perfected, may become widely useful. If so, it will be quickly improved, for it is watched by many eager and anxious eyes, and now the development of an implement requires days where formerly centuries were needed. The crude "Jumbo" of to-day may become the perfected irrigating machine of tomorrow in level and treeless sections of country.

One of these wind wheels, now running in Kansas, is twenty-one feet in diameter, twenty-seven feet long, and has eight fans. The largest water wheel in the world is an overshot wheel in the Isle of Man, and is seventy-two and one-half feet in diameter, six feet in breadth, and has a crank stroke of ten feet. It gives 200-horse power.

There may be many wind-power Ferris wheels in the States of the plains, bringing fertility where is aridity.

**AN ALPENA MIRACLE.**

MRS. JAS. S. TODD, OF LONG RAPIDS, DISCARDS HER CRUTCHES.

In an Interview with a Reporter She Reviews Her Experience and Tells the Real Cause of the Miracle.

(From the Argus, Alpena, Mich.)

As is well-known by many of the people of Alpena county, Mrs. Jas. M. Todd, of Long Rapids township, has been a great sufferer and a cripple for many years with that terrible affliction, rheumatism. Some two years ago we became somewhat interested in Mrs. Todd's case, and, in common with Alpena people, rejoice that this great sufferer has at last found relief, and is now in a fair way to a permanent cure. Knowing of the substantial benefit Mrs. Todd had received, and that she was at last regaining her health and strength, we sought to hear her story from her own lips, and here give it to our readers, in her own language.

"As you know, my name is Mrs. J. M. Todd, and for the benefit of suffering humanity, I wish through the *Argus*, to tell the world at large, what may seem to them, as well as myself, a miracle.

"Eight years ago I was afflicted with what doctors called nervous prostration. The following spring I was taken with rheumatism, commencing first in my arms and hands, and leaving them it would go directly to my head and heart. I cannot describe what I suffered. The only way I could get my breath was to sit where the air would blow directly on me. Thus I lived and suffered for two years, when the affliction left my arms and went directly to my feet. Again I was taken to the doctors, and they said I had inflammatory rheumatism in its worst form. My feet were so swollen that it was impossible for me to wear anything upon them, my hands were drawn out of shape, and I could only sit up a few minutes at a time, and often wished death would end my suffering.

"Then another year of misery, doctoring all the time, and using every remedy I could hear of, when, as a last resort, I went to Ann Arbor, where I could have the advice of not only one, but many physicians. They pronounced my trouble inflammatory and muscular rheumatism, said it was brought on by hard work, and if rest did not cure me nothing would, for medicines would not do it. I again went to the city, and was treated by one of the best physicians, but grew more helpless, and at last went to live with my daughter, thinking I could not live long. I was then as helpless as a child, and after lying down a while, I could not raise my arms to cover myself, nor speak until shaken or lifted up. One of my limbs was entirely helpless, and the skin was dry and cracked until it would bleed.

"From a tall, straight woman of over five feet, I was drawn all out of shape, my eyes were swollen shut more than half the time, my knee joints out of place, no strength to raise or dress, for eighteen months had been held up by one on each side of me to dress or undress. Another year passed when my attention was called to a case similar to mine cured by the use of Dr. Williams' Pink Pills. I was urged to try them and at last did so. In three days after I commenced taking Pink Pills I could sit up and dress myself, and after using them six weeks I went home and commenced working. I continued taking the pills until now I begin to forget my crutches, and can go up and down steps without aid. I am truly a living wonder, walking out of doors without assistance.

"Now, if I can say anything to induce those who have suffered as I have, to try Pink Pills, I shall gladly do so. If other like sufferers will try Pink Pills according to directions, they will have reason to thank God for creating men who are able to conquer that terrible disease, rheumatism. I have in my own neighborhood recommended Pink Pills for the after effects of la grippe, and weak women with impure blood, and with good results."

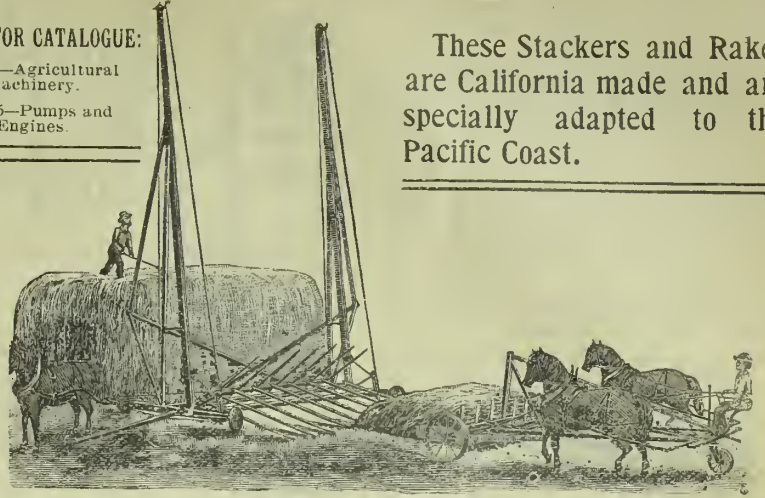
Mrs. Todd is very strong in her faith in the curative powers of Pink Pills, and says they have brought a poor, helpless cripple back to do her own milking, churning, washing, sewing, knitting, and in fact about all of her household duties, thanks to Dr. Williams' Pink Pills.

Dr. Williams' Pink Pills contain all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are for sale by all druggists, or may be had by mail from Dr. Williams' Medicine Company, Schenectady, N. Y., for 50c. per box, or six boxes for \$2.50.

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## S. F. MARKET REPORT.

## Market Review.

SAN FRANCISCO, May 15, 1895.

**FLOUR**—We quote: Net cash prices for Family Extras, \$3 40@3 50 ¢ bbl; Bakers' Extras, \$3 40@3 50; Superfine, \$2 35@2 50 ¢ bbl.

**WHEAT**—There is no large amount of trade being done just at the moment. Buyers are anything but anxious to purchase much ahead of current needs, while offerings are far from being of heavy magnitude. So the market moves along in comfortable fashion, without any violent changes in values. There is an occasional spurt, when prices make an upward move of 1½¢ ¢ ctt., but the improvement is not of lasting character. The limit of shippers is 87½¢ ¢ ctt. for No. 1 shipping quality, with 88½¢ ¢ ctt. for choice parcels. Milling Wheat is rather steadily held, being quotable at 90½¢@97½¢ ¢ ctt.

**BARLEY**—Local movement is rather slow, though quotations can hardly be said to be weak. Millers especially have to pay full figures for lots adapted to their particular uses. We quote as follows: Feed, fair to good, 63½¢@65¢; choice, 66½¢@67½¢; Brewing, nominal.

**OATS**—Trade is reported to be fairly good and activity is somewhat of a feature of the market. All descriptions come in for attention, though the more general inquiry is for parcels of choice character. We quote: Milling, \$1 07½¢@1 17½¢; Surprise, \$1 10¢@1 20¢; fancy feed, \$1 02½¢@1 07½¢; good to choice, 95¢@98¢; fair to good, 90¢@95¢; poor to fair, 87½¢@90¢; Black, nominal; Gray, 95¢@98¢ ¢ ctt.

**CORN**—There is so little doing in this article that it is hard to give anything like definite quotations. Strictly fancy stock is held above quoted prices, and buyers have no alternative but to pay asking figures, as instanced yesterday by a sale of large Yellow as high as \$1.20 ¢ ctt. We quote: Large Yellow, \$1 10¢@1 15¢; small Yellow, \$1 10¢@1 15¢ ¢ ctt.; White, nominal.

**RYE**—Quotable at 85¢@87½¢ ¢ ctt.

**BUCKWHEAT**—Quotable at 90¢@91 10 ¢ ctt.

**OILCAKE MEAL**—Quotable at \$25 ¢ ton from the mill.

**COTTONSEED OILCAKE**—Quotable at \$24 ¢ ton.

**MIDDINGS**—Quotable at \$18@19 ¢ ton.

**BRAN**—Quotable at \$14@15 ¢ ton.

**GROUND BARLEY**—Quotable at \$14 50@15 50 ¢ ton.

**VARIOUS**—We quote: Rye Flour, 3½¢; Rye Meal, 3¢; Graham Flour, 3¢; Oatmeal, 4½¢@5¢; Oat Groats, 5¢; Cracked Wheat, 3½¢; Buckwheat Flour, 5¢; Pearl Barley, 4½¢@4 12¢ ¢ lb.

**HAY**—There is a steady trade right along, but supplies are more than enough to meet ordinary demands, and the tendency of the market is against sellers. We quote as follows, old: Wheat, \$8@11 50; Wheat and Oat, \$8@11; Oat, \$7 50@10 50; Alfalfa, \$6 50@8 50; Barley, \$7@8 50; Clover, \$7@8; Compressed, \$8@10; Stock, \$6@7 ¢ ton.

**STRAW**—Quotable at 40¢@55¢ ¢ bale.

**FEED**—Manhattan Horse Food (Red Ball Brand) in 100-lb. cabinets, \$8; Manhattan Egg Food, 100-lb. bags, \$11 50.

**BEANS**—Transactions are light, while prices lack firmness, the situation generally inclining in favor of buyers. We quote as follows: Bayos, \$1 30¢@1 60¢; Butter, \$2@2 25 for small and \$2 25@2 50 for large; Pink, \$1 25¢@1 60¢; Red, \$1 40¢@1 70¢; Lima, \$1 40¢@1 60¢; Pea, \$2 60¢@2 80¢; Small White, \$2 60¢@2 80¢; Large White, \$2 55¢@2 75¢; Blackeye, \$3@3 50; Red Kidney, \$2 50¢@3; Horse, \$1 60¢@1 70 ¢ ctt.

**SEEDS**—Market generally dull, there being scarcely any inquiry for anything in this particular line. We quote as follows: Mustard, Brown, \$1 25¢@1 75¢; Yellow, \$1 75¢@2; Tiesie, \$1 90¢@2 40¢; Canary, 3¢@4¢; Hemp, 3¢@3 12¢; Rape, 1½¢@2 12¢; Timothy, 5½¢@6½¢; Alfalfa, 7½¢@7 12¢ ¢ lb; Flax, \$2@2 50 ¢ ctt.

**POTATOES**—Quotable at 60¢@85¢ ¢ ctt. for new crop; old, 35¢@50¢; Oregon Burbanks, 40¢@75¢ ¢ ctt.

**ONIONS**—New crop is quotable at 40¢@60¢ ¢ ctt.

**VARIOUS**—We quote: Summer Squash, \$1@1 25 ¢ box; Cucumbers, 25¢@50¢ ¢ doz; Asparagus, 25¢@50¢ ¢ box for ordinary and \$1@1 25 for better qualities; Rhubarb, 25¢@50¢ ¢ box; Los Angeles Tomatoes, —; String Beans, 2¢@3¢ ¢ lb for Los Angeles and 2½¢@4½¢ for Vacaville; Green Peas, \$1@1 25 ¢ sack for ordinary and 2¢@3¢ ¢ lb for garden; Green Peppers, —¢ ¢ lb; Turnips, 50¢ ¢ ctt; Beets, 60¢@75¢ ¢ sack; Carrots, 30¢@50¢; Cabbage, 90¢@91 ¢ ctt; Garlic, new, 6¢@8¢ ¢ lb; Cauliflower, 60¢@75¢ ¢ dozen; Dried Peppers, 11¢@12¢ ¢ lb; Dried Okra, 15¢ ¢ lb.

**FRESH FRUIT**—Berries — Gooseberries, 1¢@2¢ ¢ lb; Strawberries, Sharpless, \$3@5 ¢ chest; Longworth, \$4 50¢@7.

**Cherries**—Quotable at 40¢@1 25 ¢ box for red and black, and 30¢@60¢ for white.

**Currauts**—Quotable at 65¢@75¢ ¢ drawer.

**CITRUS FRUIT**—Mexican Limes are steady. Choice Oranges show strength in price, but common goods are weak and easy. We quote: California Navels, \$1 25¢@3; Seedlings, 75¢@1 50 ¢ box; Mexican Limes, \$4 ¢ box; Lemons, Sicily, \$3 75¢@4; California Lemons, \$1@1 75 for common and \$2@3 for good to choice.

**DRIED FRUIT**—Business remains quiet, with no change of consequence in values.

Following are the prices furnished by the Fruit Exchange. The figures presented represent carload lots, smaller parcels occasionally selling at slightly lower rates:

Apriots—Fancy Moorpark, 8¢; choice, 40, 7¢; fancy, 7¢; choice, 6¢; standard, 5½¢; prime, 5¢. Apples—Evaporated, 5¢@6¢; sun-dried, 4¢@4 12¢. Peaches—Fancy, 7¢; choice, 6¢; standard, 5½¢; prime, 5¢; peeled, in boxes, 12¢@13¢. Pears—Fancy, halves, 5¢; quarters, 4¢; choice, 4¢; standard, 3½¢; prime, 3¢. Dried Grapes—1½¢ ¢ lb. Plums—Pitted, 3½¢@4¢; unpitted, 1¢@2¢. Prunes—Four sizes, 4½¢@4 12¢. Nectarines—Fancy, 7¢; choice, 6¢; standard, 5¢; prime, 4½¢. Figs—White, choice, 3¢@5¢; black, choice, 2½¢@3¢.

Raisins—In sacks (50-lb. boxes selling at 4¢ ¢ lb. higher): 4-crown, loose, 3½¢; 3-crown, 2½¢; 2-crown, 2¢; seedless Sultanas, 3¢; seedless Muscates, 2¢ ¢ lb; 3-crown London Layers, \$1 40 ¢ box in 20-lb. boxes; clusters, \$2; Dehesa clusters, \$2 50; Imperial clusters, \$3; 4-crown, loose, \$1; 4-crown, loose, faced, \$1 15 ¢ box.

**NUTS**—Chestnuts, 3¢@5¢; Walnuts, 6¢@7¢ for hard shell, 7¢@9¢ for soft shell and 7¢@9½¢ for paper shell; California Almonds, 5¢@6¢ for soft shell, 2¢@2 12¢ for hard shell and — for paper shell; Pecans, 4¢@6¢; Hickory Nuts, 5¢@6¢; Filberts, 8¢@9¢; Pecans, 6¢ for rough and 8¢ for polished; Brazil Nuts, 7¢@7 12¢ ¢ lb; Cocoanuts, \$1 50¢@5 50 ¢ 100.

**HONEY**—We quote: Comb, 9¢@10¢; water-white, extracted, 6¢@7¢; light amber, extracted, 5½¢@6¢; dark amber, 4¢@5¢ ¢ lb.

**BEEWAX**—Quotable at 20¢@28¢ ¢ lb.

**BUTTER**—There is no improvement in prices. Considerable packing is in progress, which re-

Heves the market somewhat, though not to an extent to be of much immediate benefit to producers.

**Creamery**—Fancy, 12½¢@13¢; seconds, 11¢@12¢ ¢ lb.

**Dairy**—Fancy, 10¢@11¢; fair to choice, 8¢@9¢; store lots, 6¢@7¢.

**CHEESE**—Market weak, under free supplies and moderate demand. We quote: Choice to fancy, 5½¢@6½¢; fair to good, 4¢@5¢; Eastern, ordinary to fine, 10¢@14¢ ¢ lb.

**EGGS**—The market is steady, though not buoyant. Quotable at 11½¢@12½¢ ¢ dozen for store and 13¢@14¢ for ranch.

**POULTRY**—Young Ducks are cheaper. Other

**POULTRY**—The situation is shaping against sellers. Receipts are in excess of present wants, while a car of Oregon Poultry is expected to reach here this afternoon or to-morrow. We quote: Live Turkeys—Gobblers, 11¢@12¢; Hens, 11¢@12¢ ¢ lb; Roosters, \$4@4 50 for old, and \$7@9 for young; Broilers, \$2 50¢@3 50 for small and \$1 50¢@5 50 for large; Fryers, \$6@7; Hens, \$4 50¢@5 50; Ducks, \$4@5 for old and \$5 50¢@7 for young; Geese, \$1 25¢@1 50 ¢ pair; Goslings, \$2@2 25; Pigeons, \$2 50 ¢ dozen for old.

**WOOL**—Good demand still prevails for the better class of Wools, while some attention is given to common descriptions.

We quote spring:

Year's fleece, San Joaquin, ¢ lb. .... 5¢@7¢  
6 to 8 months do, ..... 6¢@8¢  
6 to 8 months Calaveras and foothill, free, ..... 8¢@10¢  
Do, defective, ..... 4¢@6¢  
Northern, good to choice, ..... 9¢@11¢  
Do, defective, ..... 6½¢@8½¢

We quote Nevada spring:

Light and choice, ..... 8¢@9¢  
Heavy, ..... 6¢@7¢

**HOPS**—Trade dull and prices nominal. Quotable at 4¢@6¢ ¢ lb.

**HIDES AND SKINS**—There is good tone to the market, the tendency of prices being upward. Quotable as follows:

|                                                                                                                                                                                                                                                                                                                                                                                                           | Sound. | Culls.    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------|
| Heavy Steers, 56 lbs up, ¢ lb. ....                                                                                                                                                                                                                                                                                                                                                                       | 8 ¢    | 6 ¢       |
| Medium Steers, 48 to 56 lbs. ....                                                                                                                                                                                                                                                                                                                                                                         | 7½ ¢   | 6 ¢@6½ ¢  |
| Light, 42 to 47 pounds. ....                                                                                                                                                                                                                                                                                                                                                                              | 7 ¢    | 6 ¢       |
| Cows, over 50 lbs. ....                                                                                                                                                                                                                                                                                                                                                                                   | 7 ¢    | 5 ¢       |
| Light Cows, 30 to 50 lbs. ....                                                                                                                                                                                                                                                                                                                                                                            | 7 ¢    | 5 ¢       |
| Stags, ..... 3½ ¢                                                                                                                                                                                                                                                                                                                                                                                         |        | 2½ ¢@3 ¢  |
| Kips, 17 to 30 lbs. ....                                                                                                                                                                                                                                                                                                                                                                                  | 5 ¢    | 3½ ¢@4½ ¢ |
| Veal Skins, 10 to 17 lbs. ....                                                                                                                                                                                                                                                                                                                                                                            | 7 ¢    | 6 ¢       |
| Calif skins, 5 to 10 lbs. ....                                                                                                                                                                                                                                                                                                                                                                            | 8 ¢    | 6½ ¢@7½ ¢ |
| Dry Hides, usual selection, 12¢@12½¢; Dry Kips, 10¢; Calif Skins do, 12¢@13¢; Cull Hides, Kip and Calif, 7¢@8¢; Pelts, Shearlings, 10¢@20¢ each; do, short, 25¢@35¢ each; do, medium, 30¢@45¢ each; do, long wool, 40¢@60¢ each; Deer Skins, summer, 30¢; do, good medium, 15¢@25¢; do, winter, 10¢@15¢ ¢ lb; Goat Skins, 20¢@35¢ apiece for prime to perfect, 10¢@20¢ for damaged, and 5¢ each for Kids. |        |           |

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## A San Diego Spraying Outfit.

For several months past Horticultural Commissioner Gunnis and his son, R. H. Gunnis, have been working on a new device for spraying orchard trees. The colonel recognized that while the gas process is effective, it is expensive, and in inexperienced hands it is dangerous; also that the kerosene emulsion, under the approved formula and when thoroughly prepared, was a complete insecticide. They therefore went to work to perfect a process for spraying which should be thorough and inexpensive. The colonel gave the supervisors an exhibition of results accomplished at the commissioner's warehouse on Fourth street, where the machinery was set up just as it would be used in an orchard.

The working apparatus is all on the platform of a light wagon. On the front end is a tank with a capacity of 100 gallons of emulsion. Back of that is a small electro-vapor engine, which operates a double-action, high-pressure cylinder pump. To the pump eight lines or less of hose may be attached. To the end of each hose is a bamboo cane, entirely perforated, and from six to ten feet in length. The liquid passes from the pump through the hose and comes out through a spray nozzle at the end of the cane. In operation the cane is poked in, about and all over the tree to be sprayed, and every leaf, branch and twig can be reached and sprayed, the longer canes being used for taller trees—more particularly olive trees. The pump can be worked at a pressure of 200 pounds, and the spray thus forced through very fine and very searching.

"No insecticide ever invented excels the kerosene emulsion when properly mixed," explained Gunnis. "Our object was to find a way to apply it thoroughly and at little cost, and we have succeeded. This process can be applied at one-half the cost of any other method. Twenty-five or thirty acres of five-year-old lemon or orange trees can be treated in a day with these machines and four men. It will destroy the red spider as well as the scale."

He has also prepared a plant for the preparation of coal oil emulsion, which consists of coal oil, whale oil soap and water in certain proportions. But the value of the emulsion depends entirely upon the thoroughness of the mixture. As prepared by Gunnis the substance looks like milk, so thoroughly is it mixed. The best of whale oil soap—85% oil—is secured and is first rolled out to a thin sheet. It is then heated and mixed under high pressure. He is elated over the success of these efforts to secure a cheap and effective insecticide, and believes a difficult problem of horticulture has been solved. The machine will go next week into the orchards of Chula Vista.—San Diegan-Sun.

## Curing Alfalfa.

Great care must be taken in cutting and curing. The proper time to mow alfalfa is just as the flowers become fairly open. Later, the stems become woody, the leaves will fall off and half the value of the hay will be lost. In the climate of California the hay should be raked into windrows, cocked up and put into stack, while still fresh and limp, before the color has been burned out of it or the leaves broken off. When it is properly cured, stock of all kinds will eat alfalfa hay and thrive upon it. For fattening cattle and sheep for market it has no equal; and as a steady diet for milch cows, with proper rations of bran or squashes, it produces the best results. Horses fed upon alfalfa, with a judicious grain ration, may be kept in the best condition, while pigs may be reared to the fattening point as upon no other food.—Ontario Observer.

## Stock Sales.

Peter Saxe & Son report the sale of a thoroughbred two-year-old Shorthorn bull (dairy strain) to Horatio Warden of San Luis Obispo; also, thoroughbred haw and sows, Berkshire and Poland-China, to W. H. Hammond of Visalia; also, a Poland-China boar to W. W. Hall of Stanislaus Co. They have recently sold twelve pigs to go to Central America.

## List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING APRIL 30, 1895.

538,575.—BATH CABINET—E. D. Andruss, Seattle, Wash.  
538,630.—WRENCH—Bouru & Hale, Gualala, Cal.  
538,108.—WAVE MOTOR—P. Breitenstein, Klamath Falls, Or.  
538,612.—AMALGAMATOR—G. W. Downs, Port Townsend, Wash.  
538,142.—HOG CATCHER—P. S. Driver, Sacramento, Cal.  
538,578.—FLASHLIGHT APPARATUS—W. B. Farwell, S. F.  
538,511.—FUEL SAVER—Annie Glud, Oakland, Cal.  
538,523.—ROCK CRUSHER—J. H. Kinkead, Virginia, Nev.  
538,601.—PIPE TONGS—G. F. Seymour, S. F.  
538,296.—PRINTING PRESS—H. Swain, S. F.  
538,556.—FAN FOR ROCKING CHAIRS—J. Weigel, S. F.  
538,570.—STEP LADDER—Frank White, Pomona, Cal.

NOTE: Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Dr. J. J. LEE has calculated that if the sun was composed of pure carbon and pure oxygen in the proportion to form a carbon dioxide the heat developed by burning it up would only last 1763 years at its present rate of radiation. The energy evolved, however, by its merely contracting one ten-thousandth part of its present radius would keep up its present radiation for 2180 years. The condensation of the solar nebula from infinity would produce, according to the doctor, heat enough to raise the temperature of a mass of water as large as the sun twenty-seven millions of degrees Centigrade. He thinks the solar system must be more than one hundred millions of years old.

## Now Is the Time to Buy.

If you are thinking of buying an incubator or brooder this season, now is the best time for you to buy.

Write to the Reliable Incubator and Brooder Co., at Quincy, Ills., for their special 60-day offer. Write at once.\*

## CHOICE FRUIT ORCHARD.

Will be sold cheap: near Los Gatos; 40 acres; the best laid out and best cared for orchard (three years old) in Santa Clara Valley: prunes, peaches, pears and almonds.

New House, 8 rooms, lot 50x112½, town Palo Alto, \$1700. Also some choice building lots in the town.

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OF CALIFORNIA.  
SAN FRANCISCO, CAL.

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Capital Paid Up.....\$1,000,000  
Reserve Fund and Undivided Profits, 130,000  
Dividends Paid to Stockholders.... 832,000

—OFFICERS—  
A. D. LOGAN.....President.  
I. C. STEELE.....Vice-President.  
ALBERT MONTPELLIER.....Cashier and Manager.  
FRANK McMULLEN.....Secretary  
General Banking. Deposits Received, Gold and Silver. Bills of Exchange Bought and Sold. Loans on Wheat and Country Produce a Specialty.  
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## THE RAISIN INDUSTRY.

A Practical Treatise on Raisin Grapes, Their History, Culture and Curing.

By GUSTAV EISEN.

This is the Standard Work on the Raisin Industry in California. It has been prepared by Prof. Hildgard, Prof. Wickson, Mr. Chas. A. Wetmore and a multitude of Practical Raisin Growers.  
Sold only by THE DEWEY PUBLISHING CO., or its agents at the uniform price of \$3.00, postage prepaid. Orders should be addressed:  
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## Breeder's Directory.

Six lines or less in this directory at 50c per line per month.

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F. H. BURKE, 626 Market St., S. F. A1 Prize Horses; Grade Milch Cows. Fine Pigs.

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P. H. MURPHY, Perkins, Sac. Co., Cal. Breeder of Shorthorn Cattle, Poland-China & Berkshire Hogs.

M. D. HOPKINS, Petaluma. Registered Shorthorn Cattle. Both sexes for sale.

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BARRED P. ROCKS, Brown Leghorns, Black Minorcas and Mammoth Pekin Ducks. In these varieties I have taken great pains in securing the best prize winners in New York and Mass., besides. I have won highest honors at the State shows. I invite every one interested to visit my ranch and see America's best bred fowls. Reference, People's Bank, or any of my neighbors. Santa Cruz, Cal. J. W. Forgers. Eggs, \$2 per setting, or three settings for \$5.

BUFF LEGHORNS. Eggs from prize winners. \$1, \$2 and \$3 per thirteen. Incubator lots at reduced rates. C. W. Hansen, San Mateo, Cal.

EGGS FOR HATCHING—Buff, Brown and White Leghorns, Plymouth Rocks, White Wyandottes, Silver Wyandottes, Light Brahmas, Indian Games, Black Spanish, Bantams, Pekin Ducks—Two Dollars setting. Mammoth Bronze Turkey, White Holland Turkey—Three Dollars dozen. Theodore Cushing, Spokane, Washington.

J. R. CATLETT, Pleasant Grove, Cal., breeds only S. C. Brown Leghorns. Eggs for hatching, 50c per setting or 11 settings for \$3. Satisfaction guaranteed.

WELLINGTON'S IMPROVED EGG FOOD for poultry. Every grocer and merchant keeps it.

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CHAS. A. STOWE, Stockton, Berkshire and Poland-China Hogs.

M. MILLER, Eliso, Cal. Registered Berkshires.

J. P. ASHLEY, Linden, San Joaquin Co., Cal. Breeds Poland-China, Essex and Yorkshire Swine.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.

## Sheep and Goats.

J. B. HOYT, Bird's Landing, Cal. Importer and Breeder of Shropshire Sheep; also breeds Cross bred Merino and Shropshire Sheep. Rams for sale. Prices to suit the times. Correspondence solicited.

J. H. GLIDE, Sacramento. Very large choice Spanish, French and Shropshire rams. Bedrock prices.

R. H. CRANE, Petaluma, Cal. Southdown Sheep.

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## Holstein-Friesian BULLS

I have for sale 10 Thoroughbred Holstein-Friesian Bulls of superior breeding—Clothilde, Netherland, Aagle and Lady Fay families, ranging in age from 6 to 18 months. Apply

HALL'S STOCK FARM, Marysville, Or, THOS. B. HALL, Sacramento.



## Lynwood Dairy and Stock Farm

P. O. Box 686, Los Angeles, Cal.

We have Berkshires of the most fashionable strains. They are from Prize Winners and are Prize Winners themselves. We have litters old enough to ship, also a few young boars 8 to 10 months old that we will sell at low prices. Correspondence solicited.

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Feed our Poultry Food and you will have healthy chickens and lots of eggs. Ask your dealer for it.

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## The Horse and His Diseases.

BY B. J. KENDALL, M. D.

Thirty-five fine engravings showing positions and actions of sick horses. Gives the cause, symptoms and the best treatment of diseases. Has a table giving the doses, effects and antidotes of all the principal medicines used for the horse and a few pages on the action and uses of medicines. Rules for telling the age of a horse, with a fine engraving showing the appearance of the teeth at each year. It is printed on fine paper and has nearly 100 pages 7x5 inches. Price, only 25 cents, or five for \$1, on receipt of which we will send by mail to any address. Pacific Rural Press, 220 Market street, San Francisco.

showing the appearance of the teeth at each year. It is printed on fine paper and has nearly 100 pages 7x5 inches. Price, only 25 cents, or five for \$1, on receipt of which we will send by mail to any address. Pacific Rural Press, 220 Market street, San Francisco.

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Niles' manual and reference book on subjects connected with successful Poultry and Stock Raising on the Pacific Coast. Over 100 pages, profusely illustrated with handsome, lifelike illustrations of the different varieties of Poultry and Live Stock. Price, postpaid, 50 cents. Address PACIFIC RURAL PRESS Office, San Francisco, Cal.

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We have Berkshires of the most fashionable strains. They are from Prize Winners and are Prize Winners themselves. We have litters old enough to ship, also a few young boars 8 to 10 months old that we will sell at low prices. Correspondence solicited.

Genuine only with RED BALL brand. Recommended by Goldsmith, Marvin, Gamble, Wells, Fargo & Co., etc., etc. It keeps Horses and Cattle healthy. For milch cows it increases and enriches their milk. Manhattan Food Co., San Mateo, Cal.

Feed our Poultry Food and you will have healthy chickens and lots of eggs. Ask your dealer for it.



### Removing Cinders.

A hint on the removal of cinders and grits from the eye may not be amiss. The inner surface of the eyelids is ridged in such a way as to promote the moving of small particles towards the inner corner of the eyes, where the duct opens which leads to the nose. This is the particular fact on which this advice is based, and which also shows the extreme folly of the method usually adopted to extract cinders from the eye. This method is to double up the forefinger and rub it into the afflicted eye until it is as red as a beet-root and suffused with tears. Some horrible contortions of the countenance are thrown in, as if to assist. Now, the only effect that such a course can have is to grind the cinder into the corrugations of the eyelid and keep it there for a week until the inflammation subsides. The proper way to do this is to catch up the eyelid by the skin and pull it away from the eye ball gently and repeatedly. This not only instantly relieves the pain, but promotes the shifting of the cinder in the right direction. In almost every case this will be found a speedy and painless remedy.

ONE of the most remarkable of recent inventions is a process for making caustic potash and soda out of brine. It has been discovered that these alkalies may be obtained by decomposing brine by means of electricity. The brine is got from salt wells. Sea water would serve, but it is not so good for the purpose because it contains much less salt. Already the manufacture of caustic potash and soda has been begun in Michigan and elsewhere. The matter is exciting great attention abroad, and all the leading chemists of the world are working at it. The inventor of this process is a Belgian named Hermite. In Europe engineers are undertaking to disinfect cities by the use of this process. All that is needed is to run wires from a dynamo into a vessel of sea water, and the latter yields a product which is the same thing as what is commonly known as "bleaching soda." The stuff is so cheaply obtained that it is being used to purify sewers and is poured into gutters. Eventually it will be extensively employed in the sprinkling of streets. By this means of wholesale disinfection, which signifies the destruction of disease-producing germs, cities will be rendered much more healthy in future.

THE work of weighing the mails in order to settle upon the amounts to be paid to railway companies for their transportation is finished in the middle section. The weighing began on April 1st and terminated on the 30th. For the purpose of these weighings the whole country is divided into four districts, corresponding nearly to the east, south, middle and western sections of the country. The mails of but one section are weighed each year, and the results obtained are used as a basis for computation for four years, until the turn of the section comes around again. The weighing is done either in the spring or the fall, as the winter mails are unduly heavy and in summer unduly light. When the work is finished contracts are made with the roads. The Government pays \$42.75 per annum for carrying 200 pounds of mail daily per mile of route. For 500 pounds \$64.12 is paid; for 1000 pounds \$85.50, and so on. Land-grant railroads receive 20 per cent less than these rates.

### Deafness Cannot be Cured

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure Deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When the tube gets inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces. We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that cannot be cured by Hall's Catarrh Cure. Send for circulars, free.

F. J. CHENEY & CO., Toledo, O.  
Sold by Druggists, 75c.

### Bridges of Old Rails.

New economies suggest themselves quickly in these days, and one of the latest to crop up on the surface is the construction of railway bridges out of old rail. The Baltimore & Ohio road has two of these structures built out of scrap such as accumulates in the stock of any line. The old rails were valued at \$9.50 a ton. The angles from which the hangers were made were of short lengths that were spliced at their centers. All gusset plates were cut out of old web plates which had been punched for other purposes. The two bridges were constructed in the repair shops of the company and required but the simplest tools in their manufacture. The advantage of this curious innovation is that the old rails, which are always on hand, can be utilized, and the cash outlay is so small on the whole job that the total cost is brought well within the price at which the cheapest wooden bridges can safely be built.

PROFESSOR CLARKE, of London, prophesies that diamonds of marketable size will soon be manufactured. M. Moissan, of Paris, has manufactured diamonds by melting wrought iron together with carbon, and permitting the mixture to cool very slowly. Under the conditions the carbon became crystallized. Simultaneously Mr. Kruttschoff, of St. Petersburg, got diamond crystals by a similar process, employing silver instead of iron. These artificial diamonds are scarcely big enough to be seen by the naked eye, but they represent the solution of the problem of crystallizing carbon. Dealing with the way diamonds are formed by nature, Prof. Clarke gives the opinion that eruptive matter from deep in the earth bursts out through upper layers of shale, the latter being rich in carbon. Slow cooling follows, and the carbon is crystallized as in the experiments of M. Moissan and Mr. Kruttschoff.

BUSINESS never was in a condition to suit everybody. Legislation can't help the man who won't work, or the man who prefers to growl at every one else rather than make an honest, industrious effort himself. Legislation cannot prevent the daily demand for bread and butter, and the first duty of every man is to earn that. The times always improve when all hands go to work with a will, drop grumbling, hunting for the bright things of life rather than its unpleasant features.

### Horse Owners! Try GOMBAULT'S Caustic Balsam



A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

### At 1/4 Price Gold and Silver Watches, Bicycles, Tricycles, Guns and Pistols, Cars, Buggies, Wagons, Carriages, Suits, Sleighs, Harness, Cart Taps, Bids,



Sewing Machines, Accordions, Organs, Pianos, Older Mills, Cash Drawers, Food Mills, Stoves, Kettles, Bone Mills, Letter Presses, Jack Screws, Trucks, Anvils, Hayforks, Press Stands, Copy Books, Vases, Drills, Road Plows, Lawn Mowers, Coffee Mills, Lathes, Sanders, Dump Carts, Corn Shellers, Hand Carts, Forges, Scrapers, Wire Fences, Engraving Mills, Wringers, Engines, Saws, Steel Sinks, Grain Bumps, Crow Bars, Bolters, Tools, Bit Braces, Hay, Stock, Elevator, Bal'ood, Platform and Counter SCALES. Send for free Catalogue and see how to save money. 151 So. Jefferson St., CHICAGO SCALE CO., Chicago, Ill.

**SPRAY** - IT PAYS. Our Pumps Have Automatic Agitators and Do Best Work. Everybody says so. Catalogue and book of instruction and Circulars free. FIELD FORCE PUMP CO., 881 Bristol Ave., Lockport, N. Y.

## Complete Fertilizers

for potatoes, fruits, and all vegetables require (to secure the largest yield and best quality)

### At Least 10% Actual Potash.

Results of experiments prove this conclusively. How and why, is told in our pamphlets.

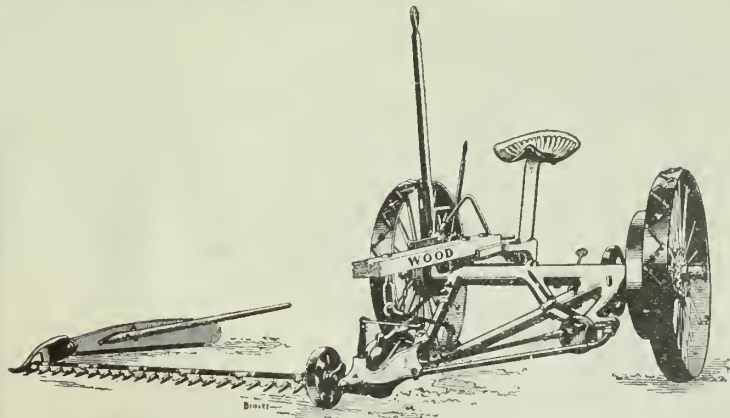
They are sent free. It will cost you nothing to read them, and they will save you dollars.

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### An 1895 Machine.

## Walter A. Wood Tubular Steel Mower.



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GOOD!

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Steel Drive Wheels, Steel Frame, Steel Shafts, Steel Knife Head, Steel Jaws for Pitman, adjustable; Steel Wrist Pin, self-oiling; Brass bearings; Eye-Winker Oilers, dust proof; Serrated Guard Plates; "Wobbler" Track Board; Spring, Foot Lift and Cutter Bar, acts when wanted, at other time resting. Adds no extra weight to right hand drive wheel. Other improvements described in catalogue. Send for it.

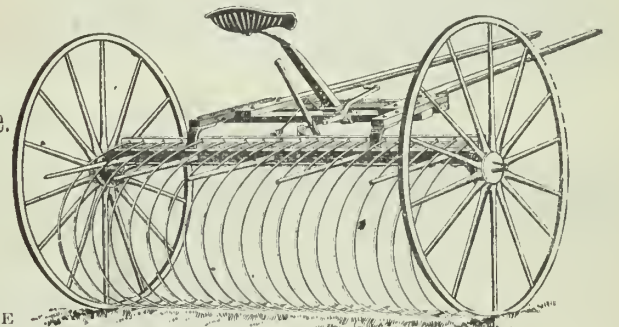
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If you want the GENUINE Wood Goods address

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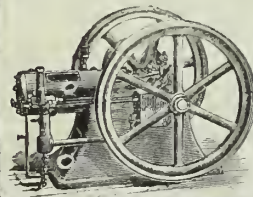
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Simplest and most economical engines on earth.

FULLY GUARANTEED.

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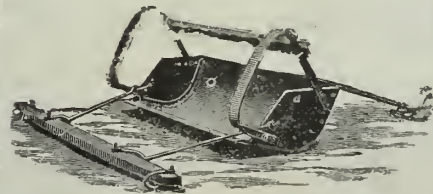
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## Porteous Improved Scraper.

Patented April 3, 1883. Patented April 17, 1883.



Manufactured by G. LISSENDEN.

The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Leveling Land, Road Making, etc. This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

This Scraper is all Steel - the only one manufactured in the State. Price, all Steel, four-horse, \$40; Steel, two horse, \$31. Address all orders to

G. LISSENDEN, STOCKTON, CAL.

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Manufacturers of—

Triple Acting Pumps, Centrifugal Pumps, Steam Pumps, Deep-Well Pumps, Wind Mills, Horse Powers, Wine Machinery.



Link-Belt Elevators and Conveyors.

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51 Beale Street, San Francisco.

## EMULSION SPRAYER



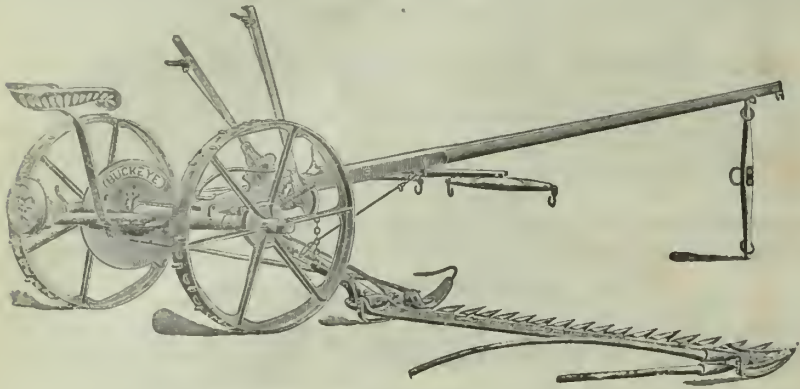
For fruit trees, vines, garden flowers. Our book on Sprayers tells how to help you, your crops and our business to pay. Its Free send for it. W & B. DOUGLAS, Middletown, Ct. New York. Chicago.

**WELL MACHINERY Works.** All kinds of tools. Fortune for the driller by using our Adamantine process, can take a core. Perfect Economic Artesian Pumping Rigs to work by Steam, Air, etc. Let us help you. THE AMERICAN WELL WORKS, Aurora, Ill.; Chicago, Ill.; Dallas, Tex.



**THE BUCKEYE**

Was named after the Buckeye State by its inventor, LEWIS MILLER, a native of the Buckeye State. The Original Buckeye Mower is made at the great Buckeye Factory in Akron, Ohio, and at no other place in the world. It has the largest sale of any high class mower, and is undoubtedly the best mower made, and HOOKER & CO., San Francisco, are the sole agents for the same in California.

**Genuine**

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|----------------------------------|----------------|
| Buckeye Mower, 4 foot 3 inch cut | Price, \$70.00 |
| Buckeye Mower, 4 foot 6 inch cut | Price, 70.00   |
| Buckeye Mower, 5 foot cut        | Price, 75.00   |
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READ THIS AND SEE HOW TWELVE BUCKEYES, DOING HARD WORK EIGHT MONTHS IN THE YEAR, BEHAVE THEMSELVES.

THE MILLER & LUX RANCHO, FIREBAUGHS, CAL., Nov. 20, 1894.

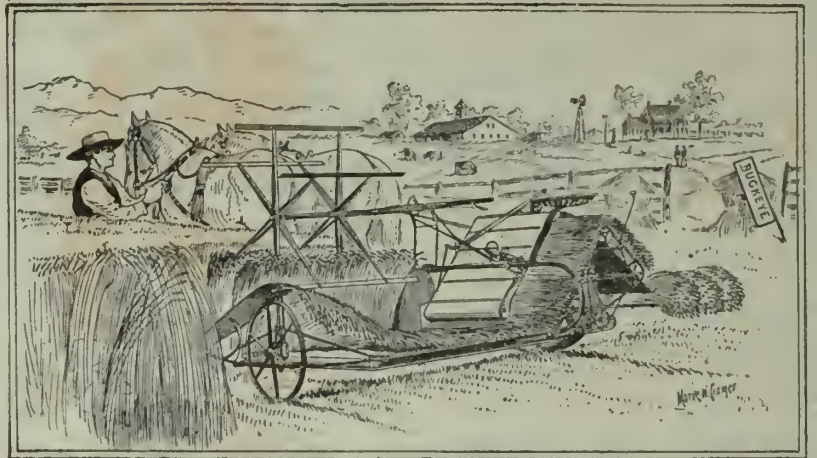
MESSRS. HOOKER & CO., San Francisco, Cal.

DEAR SIR:—The Original Buckeye Mower merits words of praise. On this Rancho we use twelve machines, which are in almost constant use from seven to eight months of the year, cutting the several crops of alfalfa. These mowers are put to a very severe test by being run so continuously and on extremely rough ground and through ditches partially filled with water. We have tried nearly all the leading makes of Mowers, but I pronounce the Buckeye superior to all others in ease of draft, strength and cutting qualities. The Buckeye costs us less for repairs than any other machine we have ever had on the Rancho. Yours truly,

J. W. SCHMITZ, Supt. Miller & Lux Rancho.

**The Buckeye Frameless Binder.**

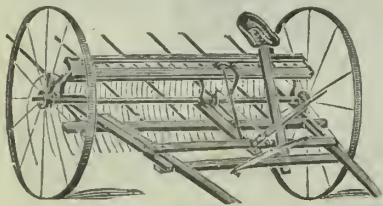
Price \$200.



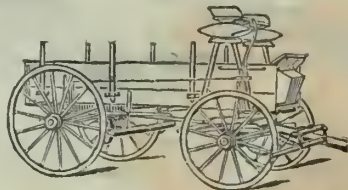
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# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 21.

SAN FRANCISCO, SATURDAY, MAY 25, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

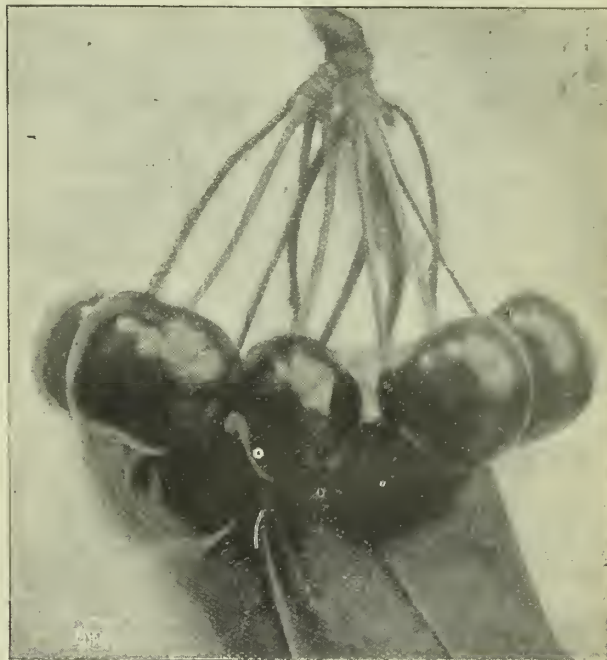
### Cherry Time in California.

We are in the midst of California's cherry time and our engravings are an exponent of the season. It is

early in April to late in July—almost four months of this delicious fruit. Our engravings are from the reports of our State Board of Horticulture and represent some of our most popular varieties, though not all of them by any means. It would take three pages of the RURAL to show all the cherries which can be found in our orchards and gardens. Even the lists of Eastern and European varieties do not content us, for by select seedlings the Pacific coast has greatly extended the cherry list and thus made a most important contribution to pomology. Our engravings show some of distant and some of local origin. The cherry region of California is narrower than that of some other fruits, and yet wider than has been sometimes conceded. It may be said that the heated interior regions do not suit the cherry, and yet on low, moist, deep soils in the great valley and in

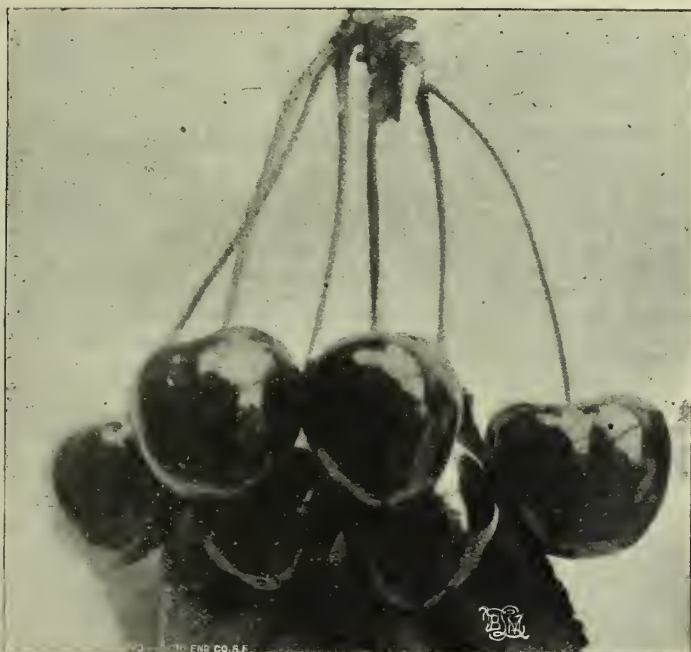


Black Eagle.



Llewellingor,  
Black Republican.

true that cherries began to ripen a month ago, and long ago were common in the Eastern markets. It is also true that, owing to the difference in time of ripening of varieties and of localities, we can count nearly two months more before the latest are gone. It is therefore possible to find cherries in California from



Black Tartarian.



Thompson Seedling.

oration of local moisture, or, sometimes, even where such conditions are not clearly discerned, we find the cherry mighty in size of tree and weight of large fruit. The cherry is each year becoming a more important factor in our fruit industry. It is now going fresh from the tree to distances formerly reached only in cans.

similar locations in the lower foothills the cherry finds here and there most congenial situations. It seems to be a question of local conditions, and where the soil is of the character described and the atmosphere moderated in its aridity by wafts of the coast breezes or by evap-



Box of Cherries California Style.



Pontiac.



Great Big.



# PACIFIC RURAL PRESS.

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ALFRED HOLMAN, Editor.  
J. WICKSON, Special Contributor.

San Francisco, May 25, 1895.

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## The Week.

### Weather and Crops.

The very full reports printed elsewhere in this paper, compiled from official and other sources, show that, generally speaking, the season is coming on finely. The hot weather of last week has been followed by a wholesome coolness, and it turns out that those who were in haste to declare the hot wave a general disaster were more scared than hurt. In the main bountiful harvests are assured. Wheat and barley will be beyond the average. The hay crop is everywhere immense. Apricots and pears will be light; prunes will be about equal to last year and everything else will go ahead of any recent year. It is still too soon to speculate much about markets, but the prospect is more favorable than for a long time past. There is everywhere manifest a tendency toward higher values, and it will be strange if the California staples should fail to share in the general advance.

### The Yuba City Meeting.

Arrangements for the May meeting of the State Horticultural Society, to be held at Yuba City on Friday of this week, are now complete and an occasion of great interest is looked for. Among those who are down for addresses or papers are Ralph Hersey of Santa Clara, B. F. Walton of Sutter Co., Col. H. Weinstock of Sacramento, Frank Buck of Vacaville, A. T. Hatch of Suisun, Miss Anna McConnell of Elk Grove, W. P. Hammon of Biggs, Gen. N. P. Chipman of Red Bluff. A local committee, composed of R. C. Kells, H. P. Stabler and B. F. Walton, have made elaborate preparations for the reception of visitors. There will be morning and afternoon sessions, with a lunch at mid-day, provided by the ladies of Yuba City Grange. The local societies of Sutter, Butte and Yuba counties have been invited to participate in the meeting, and it is expected that there will be a large gathering. This meeting has somewhat the character of an experiment. For some time past the State Horticultural Society has been studying to devise ways to increase its influence. The idea of holding its meetings in different localities was adopted last month, and the meeting at Yuba City is the first effort under the new policy.

### Frosts in the East.

On page 331 of this paper there appears a summary of the latest frost reports in the Eastern States. It appears that great damage has been done in some twelve or fifteen States; but it is too early to know its precise extent.

### Visiting Orchards.

A very entertaining feature of the meeting of fruit-growers at Yuba City on May 31st will be an opportunity to visit the famous orchards of that region. This alone will be an object lesson worth the cost of the trip and we hope many may embrace the opportunity to secure it. We have a letter from H. P. Stabler, Chairman of the Committee of Arrangements of the Sutter County Horticultural Society, stating that the members of that society will meet

visiting fruit growers at the Western Hotel, Marysville, at 8 A. M. on May 31st, and drive through the orchards of Sutter county until 10 o'clock, when the convention will assemble in the Court House in Yuba City. At 12:30 the local society will entertain the visitors at lunch. The meetings will continue through the afternoon and evening and a full list of entertaining speakers has been provided, as already published in the RURAL. All who can should attend this meeting.

### The Wheat Markets.

There is a very extraordinary state of facts in the wheat markets. At Chicago the price goes up in bounds. April 1st it was in the neighborhood of 55 cents per bushel; May 1st it was about 65 cents; on Monday of this week it touched 70 cents, and today (Wednesday) it is a fraction above 79. The excitement is intense and speculative orders come in faster than the brokers can execute them. In the meantime values are slowly advancing in Europe, but not in any sort of correspondence with Chicago. Three weeks ago the last-named city appeared to be making the London price; now Chicago quotations seem to be only one of many factors in making the London price. But while values are thus generally advancing—at Chicago by leaps and bounds and at London slowly—in San Francisco there is practically no change at all. Whatever advance is quoted in England is promptly absorbed by the shipping interest. The season's supply of tonnage is limited; it is too late to induce more tonnage, and the shippers have things their own way. There is, naturally, on the part of wheat owners, a general hope that things will somehow turn about for the better later on; but nobody can see just how the change is to come about.

### Damage by Flood.

During the past few days there has been a good deal of damage and more apprehension from flood

in the region of the lower San Joaquin. Northeast of Banta the San Joaquin river makes a bend westward, and it is the low land lying west of this bend and along the south side of the river from the bend as far west as Mohr's Landing which is endangered. By far the greater portion of it is already swamp land used as grazing ground. It is filled with small islands on which the grass grows luxuriantly, but in places the land is covered with water from an inch or two to several feet deep. It is just such land as cattle like to graze upon and is covered with herds. It is not thought that the cattle are in any danger. Along the southern border of this grazing land there are wheat fields, but it is not likely that any great amount of wheat will be reached by the water, which must first fill up the lower basin. In past overflows the water has come almost up to the town of Banta, and it is expected that this will be the case now. Banta is about four miles from the break. Reports are to the effect that the water is almost over the county road grade near Paradise cut.

## Rainfall and Temperature.

The following data for the week ending 5 A. M., May 22, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA         | Total Rainfall for the Week | Total Seasonal Rainfall to Date | Total Seasonal Rainfall Last Year to Same Date | Average Seasonal Rainfall to Date | Maximum Temperature for the Week | Minimum Temperature for the Week |
|--------------------|-----------------------------|---------------------------------|------------------------------------------------|-----------------------------------|----------------------------------|----------------------------------|
| ATATIONS.          |                             |                                 |                                                |                                   |                                  |                                  |
| Eureka.....        | .02                         | 41.78                           | 52.73                                          | 42.07                             | 58                               | 44                               |
| Red Bluff.....     |                             | 28.40                           | 30.52                                          | 24.60                             | 88                               | 50                               |
| Sacramento.....    |                             | 23.90                           | 14.03                                          | 21.30                             | 76                               | 46                               |
| San Francisco..... |                             | 25.41                           | 17.01                                          | 23.88                             | 62                               | 48                               |
| Fresno.....        |                             | 14.14                           | 7.21                                           | 10.78                             | 92                               | 46                               |
| Los Angeles.....   | .05                         | 15.91                           | 6.64                                           | 19.64                             | 74                               | 48                               |
| San Diego.....     | .04                         | 11.60                           | 4.18                                           | 10.56                             | 66                               | 56                               |
| Yuma.....          |                             | 2.97                            | 2.16                                           | 3.55                              | 100                              | 60                               |

## The Situation at Vacaville.

We take the liberty of giving our readers the following from a private letter written on the 14th inst. by Mr. Frank B. McKevitt to the editor of the RURAL PRESS:

To you, who are familiar with the topography of this section, it is quite unnecessary to say that our orchards are in the valley and on the hillsides. In the former locations the apricot crop is practically nil; these orchards furnish the bulk of the dried fruit. In the hillside orchards no damage was done and the crop will nearly equal that of '94, which was the heaviest known. These orchards supply the early apricots for shipping purposes, although quite a percentage of their product will be dried this year. A summary of the situation there is: Abundance of early apricots for shipping, but a shortage of at least eighty per cent of last year's crop for drying; peaches will be a good crop; prunes about half a crop; Bartlett pears very light; plums fair to good; nectarines same; grapes promise a heavy yield.

## From an Independent Standpoint.

The opening up of the Chinese Empire to foreign relations, which has just been conceded as one of the conditions of peace with Japan, is a fact of very large significance as related to the world's affairs. One of its effects is bound to be the intrusion of a new competitor into the industrial and commercial world; and it behooves the western nations to carefully safeguard their industrial systems against it. The Chinese are a very capable people. Whatever they may lack in the capacity for device is fully made up by their skill in imitation; and a very little teaching makes a Chinaman the master of any modern trade or craft. This capability, combined with unequalled patience in minutia and routine, renders the Chinese a people well adapted to every sort of factory work. Now that the doors are open, there is nothing to prevent their entrance into the field of general manufacture in their own country, where the labor supply is unlimited and its cost a mere fraction of what is paid even in Europe. We are told that in their own country Chinese workmen can be hired in any number at the rate of ten cents for a day of sixteen hours. In addition to this labor supply China has all the material resources of modern manufacture, including timber, coal and iron; and she has as well fine navigable rivers and numerous commercial ports. And now that she has the chance to import modern machinery and skilled superintendence, there seems no limit to her industrial possibilities. Already plans are on foot to organize the situation. There are now waiting in Japan and in the open Chinese cities agents whose mission it is to introduce railroads, applied electricity, and the whole list of modern industrial appliances. Left alone, free to trade where she will, there appears no doubt that China would capture the manufacturing business of the world. America's protection lies in her tariff policy. She may guard against the cheap competition of China just as in the past she has guarded against the cheap competition of Europe in her own markets. But in this new, as in the old competition, she will probably have to contend with the free-trader whose devotion to a philosophic ideal makes him forget that in the world of practical affairs we have to deal with conditions rather than with theories.

The income tax law enacted by the late Congress has been finally killed by a decision of the U. S. Supreme Court, which declares it to be unconstitutional. It is provided in the Constitution that all direct taxes shall be apportioned equally among the several States in the ratio of their population; and with reference to this provision, the income tax is declared to be unequal, and therefore void. The income tax has long been a popular notion with many, and it is, in theory, a very just tax, but in practice it does not work well. It is objected to, first, because it is in the nature of double taxation and again because it calls for an irritating inquiry into each tax-payer's personal and private affairs. We are so used to independence in this country that we instinctively resent anything which wears the look of governmental inquisition; and probably no tax in which this principle is involved will ever be tolerated by the American people.

From various causes, some obvious and some obscure, the value of wheat has recently made a very considerable advance in the great markets. But while the figures steadily go up at Chicago, New York and London, quotations in California are practically unchanged. The explanation is that "the ships take it all." In other words, every advance in the value of wheat abroad is added, not to the value of wheat in California, but to the cost of carrying it to market. If wheat goes up a dollar a ton in England, charter rates in San Francisco go up a dollar a ton, and the wheat owner gets the same as before. The ship owner has the matter in his own hands, because San Francisco is one of the remote ports of the world, to which only so many ships come as may reasonably expect engagements. Now, if we were able at a time like this to bring in other ships to compete with those now here, the grain owner and not the ship master would command the situation; but it cannot be done, because between us and a new tonnage supply there lies the long sail around Cape Horn. If the Nicaragua Canal were done there could be no such "cinch" as that which the ship owners now have on California, because in thirty days the available tonnage might be doubled. Reflection upon this fact ought to vastly stimulate canal sentiment on the Pacific coast.

There is a movement on foot in San Francisco for an American celebration of the coming Fourth of July. For a long time the ceremonial of our national birthday in San Francisco has been in the hands of the politicians of the City Hall in combination with the shop-keepers; and the result has been to put the whole thing in discredit. Now it is proposed to get up a committee, not of politicians or small tradesmen, but of genuine citizens whose interest will be not to make money or political capital out of the celebration, but to duly and decorously honor the day. This suggestion was made only a few days ago, and the enthusiasm with which it has been taken up indicates that a new sense of patriotic responsibility is abroad in the land. The industrial and political scandals of the past two or three years, traceable in almost every case to the domination of foreigners or to the influence of foreign ideas, has had the effect of waking up the true American sentiment of the country. The people are getting tired of hearing about Irish influence, German influence or any other influence in the public affairs of this country and are demanding straight Americanism without foreign stamp of any sort. This principle is very wholesome; it discriminates against nobody, simply demanding that when a man becomes an American, even though by adoption, he dismiss all foreign bias and become an American without prejudice. It is a principle which ought to grow, and will grow, especially in the rural parts of the country; and although it may take a long time, we have faith that ultimately the "rings" of foreigners which rule our cities will be permanently overthrown.



## Crop Outlook in Santa Clara.

At a meeting of the stockholders of the Santa Clara Fruit Exchange on Saturday last (18th inst.) there was a general discussion of fruit prospects, from which it appeared that—taking the Santa Clara valley as a whole—pears range from light to very light; cherries from light to a full crop; peaches (excepting Salways) a full crop; Salways generally a poor crop; prunes promise a light crop, ranging all the way from one-third to two-thirds of a full crop, or about equal to last season's crop. Young trees, that is, all under eight years—appear practically to have failed. Following are some of the reports in detail, which will be instructive to fruit-growers generally:

Joseph Sloss, of Willow Glen, reported that there would be a full crop of peaches in his neighborhood. Of apricots there will be about a third of a crop, and the prune crop will be about one-fourth of what it was two years ago.

C. W. Proctor, of Lincoln school district, reported that there would be about two-thirds as many prunes in his section as last year, and the apricots, cherries and plums will be light. There will be a fair crop of peaches. There will not be as many pears as last year.

From Berryessa J. P. Bahb reported that there would be about one-half a crop of prunes in his section and three-fourths of a crop of apricots. There would be nearly a full crop of peaches. Pears would be so light as not to be worth mentioning.

D. Snively, of Saratoga avenue, reported that in his section there would be a good crop of peaches, with the exception of Salways, which would be about one-fourth of a crop. The prune crop would be a little better than last year.

William Keast of East Side, Tully road, reported one-half a crop of prunes this year, or a little better than last year. Peaches will be abundant, and cherries, pears and apricots light.

From the Coyote region one-third of a crop of prunes was reported, a good crop of peaches, little or no apricots and pears.

C. C. Lint, of Los Gatos, reported one-third of a crop of prunes, one-third of a crop of apricots, peaches a full crop, cherries fair, pears scarce.

H. C. Morrill, of Wrights Station, reported that there would be about half as many prunes as last year. Of Japan plums there would be none, silver prunes two-thirds of a crop, egg plums one-third of a crop.

A. B. Farwell, of Saratoga, reported two-thirds as many prunes as last year, peaches very light, cherries light, pears none.

C. P. Bailey, of Moreland school district, said that the prunes in that section were better than last year, and peaches would be about one-third of last year's crop. The curled leaf has affected the Salways and has extended to the Foster variety, but has not as yet injured the latter. The Salway trees that bore 288 pounds each last year will not bear more than eighty-eight pounds this year. Of Foster peaches there will be two-thirds of a crop. Old prune trees are bearing well. The peaches have been trimmed closely this year and will bear large fruit.

F. B. Bailey, of Saratoga, reported that there were a little less prunes than last year, with some fruit still dropping; that the apricot crop was two-thirds of last year, and that the peach crop was good.

It was reported that on the Booksin place, in the Willows, there will be 100 tons of prunes this year as compared with twenty tons last year.

A. C. Keesling, of the Meridian road, said that the prune crop in that section would be about the same as last year, and of apricots, cherries and plums there would be half as many as last year. There will be a good yield of prunes upon the old trees that did not bear last year.

J. T. Grant, of Berryessa, reported that the prunes would yield about the same as last year. There will be a full crop of Crawford and Foster peaches. The Salways are affected with the curled leaf. There will be one-quarter as many apricots as last year.

A. B. Farwell said that he had with success used a solution of lime and bluestone for curled leaf.

From the Almaden district C. W. Childs reported that the prune crop was the lightest that has ever been known in that section. It might be said that there was not one-eighth of a crop. The pear crop is poor and no apricots to speak of.

Prof. C. W. Childs, President Hersey and others reported that there are few or no prunes on the young trees this year. The trees younger than eight years do not bear one-fifth of what was expected.

President Hersey reported that from the south—Tulare and Hanford—came reports of light crops of prunes and apricots. Upon the great Kimball place of 820 acres there will be only about twenty-four tons of fruit this year as compared with 600 tons last year.

## Gleanings.

The fruit-growers of Fullerton are trying to establish a cannery on the co-operative principle.

COLUSA Sun: Towns do not get the trade that goes by rail—it is the wagon road that gives trade to the village.

It was decided by the stockholders of the Santa Clara Fruit Exchange to add 100 feet to the length of their warehouse at San Jose.

In spite of all the talk about rust, the army worm and the grain aphid, the grain crop will, generally speaking, be good in the country about Stockton.

This will be a great year for honey production in California. In the neighborhood of Husna, so the Santa Maria Times reports, the yield for the season will be 200 pounds for each hive.

The stockholders of the Santa Clara Fruit Exchange have decided to allow each director compensation to the amount of \$2.50 for each attendance upon directors' meeting, providing the aggregate for one year shall not exceed \$25 each. Hitherto the directors have served without pay.

CHICO Enterprise: As an instance of what may be accomplished with a small piece of land, the Enterprise was informed this morning that on a six-acre tract of land a few miles north of Chico, George M. James has grown twelve tons of hay, twelve tons of beets, and four loads of pumpkins. Besides this, the land is planted to fruit trees and a small garden. If there are any doubts about a living being made on a few acres of land, this should settle them for all time.

EXETER Press: The grain-storage companies along the Fresno-Poso railroad will wish they had india-rubber warehouses this summer, as every one of them could doubtless be filled several times over. Take Roth warehouse for an instance. It will not be able to furnish storage for the product

of one ranch, if we are correctly informed. Our informant tells us that the Jones ranch, in or near Frazier valley, has 9000 acres in barley that will yield thirty sacks to the acre—270,000 sacks.

COLUSA Sun: By the way, how many farmers have secured sacks? It is not prudent to let the date of sack shipment go by without having secured at least half the number judged by the present outlook. Prison sacks can now be secured for about four cents, nor is all the money for the engagement necessary to be paid. It is now high time to begin to secure sacks. After the time has passed when shipments of sacks can be made, it will be easy to form a combine if it becomes known that a large percentage of what will be needed remains unsold.

PORTERVILLE LETTER: The army worm or some "eminent" of that nature is cleaning up vines and trees in spots in a thorough manner. One vineyard in the west field was so infested that small boys were hired to pick them off and scald them to death in buckets. On the south ford the Witt boys say the worms took their crop of young oranges in one night, not leaving enough for a taste, and they thought that in a short time there would not be a green leaf on their vineyard. There is an occasional army worm around here in gardens and they are eating the Egyptian corn some, but not to any great extent.

On Saturday last a meeting of "farmers, laborers and citizens" was held at Porterville to establish the price to be paid for labor during the coming harvest season. After a good deal of talk each person present was invited to write on a piece of paper what, in his judgment, would be a fair price for a day's wages. Only twelve farmers voted, and the average amounted to \$1.65 per day. Thirty-seven laborers then cast their votes, with the result that the average arrived at was \$2 per diem. The average of the farmers and farm hands adjusted on the above basis was therefore \$1.82½. No positive determination of the matter was reached.

WILLOWS Journal: John Pollard, of Ferndale, Humboldt county, gave us some figures this morning about dairying in his county. He said the valley that Ferndale is in is about 12 by 6 miles; that there are 50,000 milch cows in the valley; that they produce about twenty tons of butter a week. In this little valley there are thirteen creameries; the largest farm is 160 acres. Mr. Pollard has 100 acres of valley land, and keeps eighty cows on it the year round. He stated that there were a number of families in the valley that made their living from five acres of land. The land rents at from \$10 to \$14 per acre. Twenty to forty acres is a big ranch.

CONTRA COSTA Gazette: At the invitation of John Swett & Son, of Alhambra valley, Professor Arthur Hayne, of the Viticultural Department of the State University, visited that vicinity and made a special examination of the vines, with a view of detecting the presence of phylloxera. We are sorry to say that in two of the vineyards this dreaded pest was found to exist to a limited extent, and the vines affected have been eradicated and destroyed. This is the first instance in which the disease has shown itself in this county, and it calls for the immediate appointment of a fruit inspector in order that its progress may be arrested, and if possible stamped out.

THERE is complaint, says the Tulare Register, of the ravages of a green louse upon garden plants and especially rose hedges. Several applications have been tried, but no satisfactory results are reported. Judge Lovejoy used the lime and sulphur spray, but it did little more than check the work of the pest. He brought over from Visalia a sample can of mixture which has been tried there with good results. Dry sulphur has been sifted upon the bushes, but it proved harmless to the louse. W. W. Collins says that one year he gave this same pest a dose of sheep dip, or tobacco decoction, and it cleaned the bushes. This louse is a wet-weather product and it will probably disappear with hot, dry weather. It has been unusually numerous this season, even covering such trees as the black locust.

LETTER in Tulare Register: Those who rode through the Grangeville district when horses filled the pastures to overflowing cannot help being struck with the conspicuous absence of horses and young colts now. During the afternoon's drive we saw one or two American colts, and, coming away on the train, we saw from the car window half a dozen or more young mules in one band. But five years ago there would have been more spring colts in a single pasture than one can now find in a day's travel; and if the parity between horses and American dollars is not soon re-established, it will be because of the harnessing of rivers for the generation of electric power, and not because the breeding of horses has not been practically abandoned, for, as it is in Kings, so it is everywhere. Brood mares are taking a rest.

LOS BANOS Enterprise: Talk about big grain and big straw! If there can be shown in any locality in this State, or any other, heads of wheat that will measure equal to a sample of quite a large bunch of heads that was brought to this office by W. B. James, we miss our guess. There was one head of Proper wheat that measured twelve inches, including the beard, but without the beard measured eight inches. In place of the two lower meshes there were two well-formed heads of at least five meshes, with three grains to the mesh. The balance of the wheat was Chile, with heads measuring nine and the longest measuring eleven inches. From each of these there were, in place of the lower five or six meshes, well-formed heads, with at least fifteen to twenty kernels to each head. The balance of the head was formed in well-filled meshes of from three to five kernels to the mesh. These samples, said Mr. James, were more than the average of the 600 acres in the field, which is located on the Miguel grant.

WE take the following from a letter written by C. E. Spear to the Eureka Watchman: We who have labored so hard to build up and improve the dairy interest have been blindly building up a fortune for the commission man, and to-day it would be far better for us if there had never been a creamery built in the United States. When our butter was made on the dairy plan, at this time of the year every dairymen was packing down his butter; at a later date, it always brought a good price and the dairymen controlled his market in a certain degree. But what do we see now? The managers of our creameries, by comparing sales, find that they are getting 12 to 13 cents for what are acknowledged to be the finest samples of the product that were ever put into the market. Upon investigation they find that the commission man has not sold the butter, but has prepared large warehouses and is packing

and storing the butter to await higher prices, or, in other words, when he gets as much at 12 cents a pound as his warehouses will hold he will raise the price to 20 or 25 cents, and the hard working dairymen gets 12 cents, out of which must be paid freight, drayage, State and county taxes, hired help, stealings, and the commission man.

W. P. MILLER, mail contractor between Ukiah and Harris a distance of ninety miles, has placed an order for two 6-horse power gasoline tricycles, which he will use instead of horses. Mr. Miller's contract runs for three years. This is the only stage line in the United States which will be run by steam tricycles, and the experiment will be watched with interest all over the country. There will be accommodations for passengers and the rate of speed will be from three to twelve miles per hour.

LETTER from the Soldiers' Home, Los Angeles Co.: The inroads of the army worm upon the young fruit in the Home orchard were so serious during the week past that on Wednesday Gov. Rowland called for volunteers to abate the nuisance. On Friday 250 members responded, and the insects were carefully and completely cleared off from 2000 trees. They will be gone over again on Tuesday with a chemical preparation, as a surprise to them. Some myriads of the worms were found beneath the surface of the ground. The worms are not as much in evidence about the foliage now as they were a week ago, but they have made bare poles of some rows of newly set callalilies. By advice of the State Horticultural Society all of the orange trees, nearly 300, on the Home grounds have been uprooted and destroyed. They were not only badly infested with scale, but were of inferior quality. Gov. Rowland will recommend the replanting with a better grade, as he is advised that the location and soil are favorable for orange cultivation.

TULARE Register: At the time the frosts visited Tulare county, the Hanford papers expressed sympathy with us in our misfortune, but assured us that they were not greatly hurt, but they were. It does not appear from what one sees along the road that there can be a half of prunes in Kings county, but we suppose that there are some trees that have some prunes, though that crop is a practical failure. They claim a half crop of apricots, but probably have not a third of a crop, though some trees are full. The peach crop seems to be heavy enough for the trees, and there will be some pears, though not a large crop. The vineyards seemed to us to be in prime condition, both as to cultivation and promise of crop, but the sphynx moth and the army worm are in the land and sharp work will have to be done to save the crop from destruction; but sharp work will save it. Kings county has not lost its faith in raisins; and if it does not take first place as the raisin center of California, it will be because it does not stay with the business, and there are now no indications of its being abandoned.

A WRITER in the National City Record gives the following formula for making orange wine: Wash the oranges, cut them in halves, and squeeze out the juice; be careful and not get the oil of the rind in; let juice remain in tubs for eight or ten hours until all the fibrous matter can be skimmed off. If you want a sweet wine, add five pounds of granulated sugar to each gallon of juice. If you want a mild, sour wine add five pounds of sugar to each gallon, and then put one gallon of water to each gallon of juice. Strain the juice into barrels and set them where they can remain undisturbed for three months. In the bung make a hole to fit in a piece of small rubber tubing about a foot long; put the outside end in a vessel of water placed on the barrel; this tube is to allow the gas to escape and will exclude the air and insects. When the juice has ceased to throw off gas, which can be determined by the air bubbles coming up from end of tubing, you can bung it up tight and let it remain for a few months, then draw off into bottles and keep in a cool place. Any person can make strawberry, currant and rhubarb wine in this way in a gallon jug.

LOS ANGELES Producer: G. W. Prescott of Highland, who took the medal for the best box of packed oranges at the late State Citrus Fair, has been experimenting with iron filings in his young orchard. Being master mechanic of the Santa Fe system in southern California at San Bernardino, he knew more about iron filings than he did about guano or any other fertilizer; and knowing that a certain amount of iron in the soil was essential to a healthy growth of the tree and the production of fruit, he put five pounds of this material around each tree, and as a result he has a highly colored orange, where before he had a pale-colored fruit. The cost is insignificant. A thousand trees on ten acres will require 5000 pounds of filings, which costs \$4 per ton—\$10 for the ten-acre orchard. Of course, this application of iron is not intended to supersede all other fertilizers, but simply to supplement them in order to give a good color to the fruit and enable the grower to put an attractive orange on the market, and incidentally to assist him occasionally in winning a gold medal. The railroad shops at San Bernardino can furnish one ton per day of this material, and other shops can also assist in supplying the demand.

OROVILLE Register: When men began to see the great wheat farm giving way to orchard planting they felt that a new era was dawning on the Sacramento valley, but experience has shown that the big orchard is of but little advantage to a locality. To handle a large orchard there must be many men employed, and it is profitable for the owner to employ Japs or Chinese rather than white men. A home illustration will show this. Chico is surrounded by many large and handsome orchards. General Bidwell has over 40,000 trees, W. J. O'Connor has 9,000, Z. W. Burnham has 5,000, Drexler has 5,000, E. T. Reynolds has almost as many, G. M. Gray has 4,000, Earl & Stansbury have 6,000, C. L. Stilson has 8,000, B. F. Allen has a very large orchard. In these orchards there are more or less Japs and Chinamen employed, and in consequence white men are driven away from Chico by lack of work. Chico is losing in population and in school children. Biggs is similarly situated. Near her are some of the finest orchards in the State, but in these too many cheap foreign workmen are employed, and Biggs is not making the progress that she ought to. Thermalito, on the other hand, is filled with many small orchards. At Biggs 18 orchards contain almost 300,000 trees. In Thermalito there are 77 orchards and there are less than 100,000 trees. Now, in the small orchard the owner does not employ Japs or Chinese at all, and in consequence the locality is thriving and prosperous. The population, the wealth and the number of school children are increasing. What we need are small orchards and small farms with a family on each.



## Weather and Crops.

Report for the Week by the Director of the State Weather Service.

Director Barwick, of the California Weather Service, summarizes as follows:

The average temperature for the week ending Monday, May 20th, was: For Eureka, 52°; Fresno, 70°; Independence, 70°; Los Angeles, 64°; Sacramento, 63°; San Francisco, 54°; San Luis Obispo, 56°; and San Diego, 60°.

As compared with the normal temperature there was a heat deficiency at all points excepting Fresno and Red Bluff, those places being two degrees warmer than the normal.

The deficiencies at other points were two degrees at Eureka, Sacramento and San Diego, and four degrees at San Francisco.

The total precipitation was a trace at Eureka, Independence and San Diego, while at Los Angeles .10 of an inch was measured. There was no precipitation at Fresno, Red Bluff, Sacramento, San Francisco or San Luis Obispo.

As compared with the normal precipitation there was a deficiency at Eureka of .66 of an inch; Fresno, .07; Red Bluff, .23; San Francisco and Sacramento, .14, and San Diego, .07 of an inch; Los Angeles being the only place having an excess.

The pleasant and cool weather of the past week has been very beneficial to all crops, while the lack of rain and the excess of sunshine will result in there being a hay crop saved, of the very best quality, bright, clean and sweet.

Riverside county reports an abundant apricot crop, although that crop as a whole for the State will be much less than the usual yield.

Hops are progressing very favorably, as are also grapes, both wine and raisin.

## Southern California.

VENTURA (Saticoy)—Weather fine for beans and corn. Apricots are going to be a fair crop. In some orchards the fruit will have to be thinned. Outlook for beans and corn favorable. (Fremontville)—Barley has ripened very rapidly and has been damaged to some extent. Beans are being rapidly planted.

ORANGE (Tustin)—The grain yield will be heavy. Bee men are generally getting a good flow of honey. Apricots light; prunes heavy; hard-shell walnuts light, soft-shell fair crop; peaches good crop. Army worm has done some damage.

SAN BERNARDINO (Redlands)—The cutworm is doing considerable damage in the western part of Redlands and farther down the valley. It is boring into apricots and peaches, and even oranges are not exempt.

RIVERSIDE (Riverside)—There has never been a promise of a heavier crop of apricots than the present season. The cutworm did some little damage during the late cool weather. (San Jacinto)—No high winds here as reported at other places, and our fruit crop has not been injured.

## San Joaquin Valley.

STANISLAUS (Turlock)—The heat hurt fruits of all kinds. Wheat, except early sown, will be a failure. (Crow's Landing)—Some pieces of wheat suffering from a little red rust.

MADERA (Madera)—Weather very favorable for all crops. Rust has done some damage.

FRESNO (Selma)—Grapes are promising a fair yield, though some vineyards in the vicinity of Sanger and Reedley have been attacked by the army worm. Prunes are dropping in some sections, but it is probable that enough will remain on the trees to make an average crop. Peaches are abundant. (Fresno)—From all over the county come reports that the fruit and raisin crops will be heavy. It was feared that the army worm would do great damage, but this now seems unlikely. The vineyards attacked are in nearly all cases those that have not been properly cultivated and would not have yielded a heavy crop even if not eaten off by the worms. Some vineyards, it is said, are stripped of all their leaves. The apricot crop will probably be a little lighter than it was last year, but the quality promises to be better than usual. (Reedley)—A large worm or caterpillar has done considerable damage in vineyards but is disappearing. Some grain is injured slightly by rust.

TULARE (Tulare)—Grain suffering on account of hot wave. Fruit short. Army worms injure the grape prospect. (Lime Kiln)—Grain heading out well. There will be quite a few lemons on young trees this year.

KERN (Bakersfield)—Crops of all kinds are doing well, with abundance of water for irrigation.

## Coast Region.

SAN LUIS OBISPO (San Luis Obispo)—Cool weather has prevailed the past week, being very beneficial to green crops and pastures. Haying is in full blast. Fruits of all kinds are doing well, peaches excepted, they are showing considerable signs of curl leaf.

HYMOLDT (Hydesville)—Weather generally beneficial to all crops.

SANTA CRUZ (Santa Cruz)—The two hot days last week did no damage. Pear crop will be good. Apple crop does not promise well. Apricots light; prunes fair crop; cherries heavy.

SAN BENITO (Hollister)—No material damage to either the grain or fruit by the hot weather. Wild cat hay damaged some by rust.

MONTEREY (Estrella)—It was thought the grain would be greatly injured by the hot wave, but since the cool weather has begun the grain begins to assume its green color. It is thought there will be about three-fourths of a crop, mostly wheat.

## Sonoma Valley.

SONOMA (Forestville)—Cherries dropping badly; prunes ditto. Hop yards are in fine shape. Grain looks well. (Sebastopol)—Safe estimate on fruit seems to be: Good crop of apples; fair amount of peaches; Salways affected by curl leaf and few clings; pears, light crop, and affected by blight; medium crop of prunes and cunning plums; not many black cherries and light crop of white ones; blackberries look as if there would be the usual large yield. There will be a large acreage of potatoes planted this year.

## Mountain District.

MARIPOSA (Mariposa)—Crops good. Fruit crop good, with exception of apricots and peaches. Grasshoppers in considerable numbers have made their appearance near Merced county line.

PLACER (Newcastle)—Fruit crop will average good. (Rocklin)—Grain looking well. Peaches, good crop; plums and pears dropping some.

SHASTA (Shasta)—The warm weather for the past week has

caused all crops to improve wonderfully. More than an average crop of fruit is assured where the frost did no damage.

SISKIYOU (Ager)—Fall-sown grain still looking very promising, but rain wanted for late-sown of all kinds. (Yreka)—Warm weather has been beneficial.

## Sacramento Valley.

TEHAMA (Vina)—The nights have been cool, warming up during the day; prevailing winds from the south. Crops are looking well; the best hay crop in several years. (Red Bluff)—All crops are doing fine.

GLENN (Fruto)—No damage from winds; heavy crop peaches, prunes, nectarines, late plums, and extra heavy crop of grapes. Grain is looking well, especially barley.

COLUSA (Grand Island)—Prunes, plums, peaches and pears a fair crop. Grain is coming on good.

BUTTE (Oroville)—The apricot crop of Rio Bonito was not injured by frost as much as was at first supposed. Hay in Butte will be a heavier crop than was ever before known in the county. (Pentz)—Fruit of all kinds is doing well, but will have to be irrigated unless rain comes soon. Peaches and prunes are dropping some, but not enough to damage the crop.

YUBA (Marysville)—Some peaches and apricots are dropping, and on examination a good many are found to be black at the pit. As a consequence, orchardists have stopped thinning, fearing further dropping later on. (Wheatland)—Grain will be of excellent quality; the yield a good average.

SACRAMENTO (Clay)—All grain doing nicely, even the late-sown. (Trask)—Some black smut appearing on pears, which can be easily overcome by spraying. Weather favorable for a large acreage in tomatoes and cantaloupes, and will be earlier than usual by two weeks.

YOLO (Winters)—The apricot trees appear almost destitute of fruit, caused by the combined effects of frost and north wind. In the hills the yield will be much heavier.

SOLANO (Davisville)—Fruit looks as well as could be expected after the north wind. North of here worms are doing damage to the vineyards. (Dixon)—The grain on the low lands is considerably spotted, but on the ridge good crops will be the rule.

## Prof. Husmann on the Marketing of Wines.

NAPA, CAL., May 18, 1895.

TO THE EDITOR:—In your columns, "From an Independent Standpoint," which I always read with a great deal of interest, it is stated that "The Yolo Winery has lately sold 98,000 gallons of wine to the New York firm of Sgobel & Day at satisfactory prices." Mr. Meiling (not Mieling as you have it), the agent of the winery, estimates that the stockholders realized about \$6000 more for the stock than they would have done if it had been sold to San Francisco dealers. To this you append some remarks, criticizing the capitalists of San Francisco, and justly, too, for their inactivity in the matter.

Now, while I fully concur with you that such a condition could never have existed which makes such prices as the Yolo Winery and others have received for their wines, sold through the firm of Sgobel & Day, not to them, as they simply act as auctioneers. I cannot see anything satisfactory in the prices obtained by them. I have their circulars and reports of sales, by which the wines shipped by the Yolo Winery averaged from 24 to 28 cents per gallon for port and sherry. Let us take 26 cents as an average. The deduction to be made from this is 4½ cents for cooperage, 5 cents for freight and 2½ cents for drayage and other expenses, commission, etc., amounting to 12 cents per gallon in all, leaving 14 cents net—a price which, I am told, could easily be had in San Francisco for good port last winter. Now, if this is satisfactory to them, I am glad they are happy over it; but I can see nothing in these sales and others by the same firm to encourage others to do the same, and, as Mr. Day has been in this State—lately in Napa valley—soliciting other consignments, I think the note of warning sounded by Mr. Wheeler, manager of the California Wine Makers' Corporation, which I enclose, should be duly heeded. I hope you will publish it for the benefit of our long suffering industry, which, at last, under the able management of the corporation, has a prospect of seeing brighter days.

The sales to which Mr. Wheeler refers were made at the rate of 12½ cents per gallon—double the price offered by the dealers last fall. The wine is to be delivered monthly, at the rate of 700,000 gallons per month, paid for in cash, and the proceeds divided pro rata among the stockholders. The prices for future sales have already been advanced to 17½ cents, naked, in San Francisco for the lowest grade of sound wines, and will be raised again from time to time. This is much better than auction sales at New York, which is generally the dumping ground for all inferior wines, and thus is frequently overstocked. The first pro rata distribution for the deliveries during the month of April has just been made, and makes our wine makers feel once more that they are not owned, body and soul, by a few wholesale dealers, who paid about what they pleased to those who were in sore need of money, and ruined the prices outside, by cutting each other's throats, regardless of what became of the "goose that laid the golden egg."

This has been done by co-operation and the enterprise and pluck of our executive committee, who did not hesitate to pledge their individual credit to obtain money from capitalists as soon as they saw that the wine makers could be united. Had the capitalists of San Francisco shown a disposition to advance money on wines to the growers to establish warehouses in San Francisco, under judicious management, and distribute and sell from there, it need not have come to this extremity, and in this you are right. Instead of this they only assisted a few dealers to strangle the growers. But we have found

our way at last, and every wine maker should be ready and willing to join a corporation which has already accomplished so much. GEORGE HUSMANN.

Following are the enclosures to which Prof. Husmann refers in the above letter:

(From the Napa Register.)

The attention of the Register is respectfully called to the following, taken from a letter received by the California Wine-Makers' Corporation from Sgobel & Day, auctioneers at New York, under date of May 1st:

"We beg to advise sale to-day of California wine as follows: From Napa—Eight barrels Franklin Chasselas, 16c; 20 barrels Berger, 15½c; 10 barrels Riesling, 16½c; 2 barrels Sauvignon Verte, 15½c; 10 barrels Chasselas, 16c.

"To-day's sale is what we may call quite disappointing, but the fact that some of the wines were deficient in alcoholic strength and others did not land in prime order made the buyers somewhat timid in bidding. Of course when white wines lack so much in alcoholic strength they have to be mixed with other wines or put through some sort of a process before they can be sold. For this reason these light wines cannot obtain high prices. Our friends tell us they are pretty well stocked up, but we think had these wines been better the bidding would have been livelier. We remain, respectfully yours, SGOBEL & DAY."

The publication of this should prove of value to all intending wine shippers, who have adopted the auction system of disposing of goods which they are unable to market in California as wines.

Taking the cost of barrels at 5c per gallon, freight at 5½c including local freight and commission, and other general expenses amounting to 1½c, make the total selling expenses 12c, and the wine netted the owner from three to six cents.

Particular attention should be called to that part of the letter which states that such wines must "be mixed or put through some sort of a process" to make them salable. The press is asked to pass judgment on the pernicious effects of sending such goods to represent California and to be sold under the proud caption of Napa County "Riesling," or wine of other reputable districts.

Good wines to the amount of 7,000,000 gallons have already been sold through this organization at 100 per cent advance over the prices of one year ago. We are striving to induce all wine producers to distill their inferior goods, thus cutting down the supply to the betterment of prices generally.

The wines named in the above letter are outside of our control, but were passed upon, duly condemned and the owners requested to see that they were disposed of by distillation. Against the protest of our body and other well-wishers of California industries, they are now going to New York. Will the press assist us in discountenancing such methods? The injured district particularly should deprecate any continuance of the above. CALIFORNIA WINE-MAKERS' CORPORATION, Per J. H. Wheeler, Manager.

San Francisco, May 5th, 1895.

In a letter to the Napa Register, Prof. Husmann comments as follows upon Manager Wheeler's statement:

The letter of Mr. John H. Wheeler, general manager California Wine Makers' Corporation, shows again how many of our wine makers are yet blind to their best interests. Past experience should have taught them sufficiently that, besides actual loss to themselves in such transactions, one such shipment will do more to ruin the reputation of California wines than can be obtained in months or years. It is such stuff as this which breaks down the price and brings odium on the grower and the place from which it was shipped. How much better would it have been to dispose of it here to the distiller for six or eight cents net than to ship it to a market already glutted and obtain but one-half that price. The Corporation is working on the only sure basis of success—honest goods for fair prices—and the directors should have the endorsement of every wine maker in their efforts to exclude and condemn to the still all inferior and unsound wines. They cannot be too strict in this, and the success with which they have already met in their sales should convince every one, who has not already done so, to join them, furnish them sound wines and exclude and brand every one who cannot yet see that "honesty is the best policy," and that in union there is strength. This is a duty every honest wine maker owes to himself as well as to our community, which has always prided itself upon the quality of its products. Can we not see that this is the only sure road to success? The future looks bright for the wine industry, but we must work together skillfully, honestly and unitedly. G. HUSMANN.

## Patents for Agricultural Inventions.

According to the recent report of the Commissioner of Patents, 10,122 patents have been granted for improvements on the plow, in this country, within a century. It is not easy for one who has not studied the history of invention to see how so many inventions, each supposed to be new and useful, can be placed upon so simple an implement as a plow. The great number of inventions show the efforts which have been made to improve that implement which is so essential to agriculture, yet it is probably true that the plow is the least perfect of our agricultural implements. It has been correctly said: "It is strange, in view of the antiquity of the plow, and of the importance of the plow, that the construction of the plow has received so little attention from scientific men; that the principles of its construction have been studied so little by those who manufacture it, and that its possibilities of improvement are so little comprehended by those who use it."

According to the recent report, 10,155 patents have been granted for harvesters and 4130 patents for threshing machines. The great improvement which has been made in these lines is readily appreciated by those who can contrast the operations of harvesting and threshing fifty years ago with the same of the present time.

In the recent report of the Commissioner of Patents the manufacture of sugar and of salt are unfortunately classed together. The number of patents granted for inventions in those lines is 2405.

In the industries which may be said to be strictly agricultural, 64,797 patents have been granted. But these figures are far from showing the full advantage which agriculture has received from invention. For instance, in metal making and working, and in tools for metal working, 24,080 patents have been allowed.



## HORTICULTURE.

### The Promise in the Olive.

By JOHN S. CALKINS, of Pomona, before the Southern California Pomological Society, at Escondido, May 2 and 3, 1895.

"The trees went forth on a time to anoint a king over them; and they said unto the olive tree, Reign thou over us."—Judges, IX; 8.

The olive has been intimately connected with the history of man from a remote period, furnishing him both food and medicine. As far back as the building of Solomon's Temple we learn that large quantities of olive oil were consumed by the workmen. At the present time multitudes of people rely upon it as their chief staple of food, as it takes the place of both meat and butter. Statistics show that the consumption of foreign pickled olives and alleged olive oil is immense in this country, though it is known that the oil is shamefully adulterated, and that the pickles are put up in a green state, being no better for food than any other unripe fruit. The supply of olive products is so inadequate to meet the heavy demand that it is the general practice of European merchants to compound olive oil with inferior oils, so that it is believed to be out of the question to obtain pure olive oil, even in the markets of the olive-growing regions abroad, and it is no longer a secret that green plums are put up largely in the States and sold as pickled olives. As an illustration of how little the olive is generally known in the United States I will mention a letter received from a gentleman in Wisconsin inquiring what the olive is like, as all he knew of it was what he had read about it in the "Arabian Nights." Another letter of inquiry from a Dunkard preacher in Indiana said all he knew of it was what he had gleaned from the Bible, so it is not surprising that the people of this country may be humbugged into buying green plums for olives. Under these conditions it is not strange that the olive is not in as general use here as it is in the olive growing regions of Europe, where the peasants grow their own olives and put them up ripe, and make their own oil for family use. The olive is such an important food factor with those people that a shortage of the crop would be a most serious matter with them.

For compounding medicines olive oil is preferred by druggists above all other oils; as a medicine and a remedial agent it is largely used in Europe and it is fast coming into favor among physicians in this country. On this point I quote A. E. Osborne, M. D., Ph. D., superintendent of the Home for the Care and Training of Feeble-Minded Children, Glen Ellen, California. He says: "During the past four years we have used gallons of olive oil for bathing, inunctions and massage, on the widest range of cases and the happiest results invariably. It is kept handy for daily use for all sorts of dressings, and is in very truth a household remedy. Leaving out of consideration its emollient, demulcent and laxative properties, as before enumerated, our experience warrants us in giving it precedence as a reconstructive and to assume the following conclusions:

"First—It stands unrivaled as an element of natural food.

"Second—It is unsurpassed as a remedy in most, and probably in all wasting diseases, where it relieves the stomach, rests the over-taxed digestive organs, lubricates inflamed alimentary tracts and arrests their future congestion, satisfies most all demands of the system for a concentrated heat-producing food, and restores to a worn-out or broken-down tissue just such elements of repair as its reconstruction demands.

"Third—It possesses a direct alterative effect in constitutional diseases.

"Fourth—It exerts a distinctive influence upon the liver, and apparently also upon the kidneys. The benefit to be derived from olive oil in liver derangements are not at all chimerical.

"Fifth—Its reconstructive properties follow its external application quite as readily as when given internally, and in some cases the former seems to be preferred."

The medical profession, then, has a deep interest in the culture of the olive tree, and the fostering to the utmost perfection of the industry of preparing a positively pure oil, such as may be placed in everybody's hands "without prejudice and without misrepresentation." Physicians have the same right to demand an absolutely unadulterated oil as they have to demand pure quinine, pure morphia, or any other drug, chemical or remedy. But the sick, they who, suffering, need its balm and would be grateful recipients of its priceless virtues, have the strongest plea to enter at the bar of justice against its contamination and substitution.

It is the opinion of our most sagacious men that the prosperity of southern California depends chiefly upon the success of the fruit industry, so it is well to consider what the olive is capable of contributing to the general result. No one who has studied the subject doubts that we have a climate and an acreage eminently adapted to the production of the fruit in bountiful crops and that we have an eager and growing market for the product. When one reflects upon our wide market and increasing demand and

the small supply to meet it, there does not seem to be any cause to fear overproduction.

In some respects the olive stands alone among fruit trees, namely: It blossoms so late in the season that the young fruit is never destroyed by frost; the trees are never killed by freezing here on the coast, nor is the fruit injured by frost, especially of those varieties which mature before winter freezing sets in; it will thrive and give fair returns where other fruit trees would fail for lack of sufficient moisture; this coast is the only section of our country where it has proved productive, hence competition of the home product will be limited; the fruit is capable of taking the place of meat and butter, besides affording a sovereign remedy for many of the ills which flesh is heir to. These unique and special features commend it to the favor of fruit growers.

Persons who are conversant with olive culture abroad agree that we cannot learn much from the peasantry who are mainly in charge of it there; common sense and experience must be our guide in planting, pruning and cultivating the trees; inventive genius will find out the best method to conserve the fruit and manufacture the oil.

Olive growing is specially adapted to the conditions of the poor man; he may raise the fruit on cheap land and convert it into oil and pickles by simple means, the product supplying substantial food for his household, the surplus finding a willing market at the store; much of the hardest work may be done by the family and it comes at a time when work with other fruits is not required.

Oil mills and pickling works will continue to increase as the supply increases, where the fruit may still be sold, as it now is, direct from the tree, if growers prefer that way of disposing of their crops. Quite recently a Los Angeles capitalist was inquiring if there were enough olives in his section to warrant putting up an oil mill in that city. The outlook is very favorable to the operating of olive oil mills and the canning of sardines under the same management; the waters of our shores abound with the fish and the time is drawing near when the sardine may once more be had put up in genuine olive oil. Whoever inaugurates the industry again on that plan will win the markets of this country.

It is generally supposed that the olive tree does not come into bearing until it is seven or eight years old, but that does not apply to this coast, for it is common for the trees to commence bearing the third year after planting in the orchard and continue to bear for generations; there are trees at the San Diego Mission supposed to be 125 years old, which are still bearing, having yielded a crop this year. From the Escondido Times I clip the following: "There is growing on the sidewalk at the residence of P. A. Bettens, this city, a Manzanillo olive tree, twelve feet high, that was planted in the spring of 1889. When planted the tree was about fifteen inches high, raised from a rooted cutting of the previous year. In 1892 the tree yielded one gallon of olives; in 1893 there was gathered from the same tree five gallons of olives." If all the streets of your city were planted to olive trees the revenue to the city would be large; those tourists who come to the kitchen door for a job could be accommodated as the crop matures at a season of the year when they are most numerous; they could be employed by the city to pick olives and I guarantee they would not consume more fruit than they gathered. I believe I am within bounds in saying that the returns from the olive trees would run your city government, pave your business streets, put down your cement sidewalks, and keep your streets sprinkled, besides rendering your city one of the most beautiful on this coast.

In setting out an olive orchard the selection of varieties comes up; there are upwards of sixty varieties in the nurseries of California, and out of those there are, I should say, a dozen or so of the best known that have proved worthy of orchard planting; doubtless most all of the sixty odd sorts, after further acquaintance, will be found to be valuable acquisitions. As the industry takes on system a grader will be used and the larger fruit of all varieties will be made into pickles and the smaller fruit converted into oil.

The question of planting different varieties of olive trees in the same orchard with a view of increasing the yield of fruit has been under discussion for a year or more. At the meeting of this society last November I contributed a paper giving a detailed account of some work performed a year ago in cross-pollinating olive flowers in my experiment orchard at Pomona, with a view to ascertaining if such planting of different varieties is desirable. I will mail the paper to any one who will write to me for it. While it cannot be expected that one experiment would be conclusive, the result of the work seems to favor the utility of planting different varieties in proximity. I shall continue the work this month with the hope of gathering additional data. At my request Prof. Cook, of Pomona College, and Mr. J. W. Mills, foreman of the Pomona Experiment Station, did some work at the same time and in the same line, with results favoring the planting of different varieties together.

We are now on the threshold of the olive industry,

but any one who studies it in its different phases, taking into account our unequaled advantages in producing the fruit, its value as a food and medicine and the profitable and increasing market, must conclude that our coast in time will become as famous for its olive groves as the shores of the Mediterranean.

### Still More Earthworms.

TO THE EDITOR:—Permit me to contribute a few lines to the "symposium" of earthworms, now having a run in your columns.

I am glad to know that my esteemed correspondent, Mr. Raymond, finds them an improvement to his land, and think that every nurseryman in the State would gladly and gratuitously send him every earthworm on their property and prepay the freight charges if thereby they might forever rid themselves of the pest.

So injurious are they considered that most growers are at considerable expense to keep them in check, and have recourse to covering the beds whereon they are to stand their pots, boxes or seed trays, with sharp sand or coal ashes to prevent the entrance of these nuisances.

A fairly experienced gardener can walk through any collection of pot plants and unerringly pick out every worm-infested plant. He need only select such as are sickly, yellow-leaved and moribund and the soil will be found to be alive with the swarming vermin. *Per contra*, such as are dark-leaved, lusty and in good growth may most times be searched in vain for a single worm.

As this is a statement of fact that, without fear of contradiction, we venture to state would be corroborated by every amateur florist and commercial nurseryman in the country, it makes, *prima facie*, a strong case against the earthworm. And yet this does not settle it. An honest presentation of all the facts should include the statement that wherever plants are sickly or feeble, be they in pots, boxes or even in the open ground, and the soil affected with worms, concomitantly we find poor or defective drainage. Soil under such conditions is called sour, and it is an axiom among plantmen that a sour soil and plant decay are corollaries of one another.

Now, whether the proximate cause of plant death be due to the presence of poisonous, *i. e.*, non-aerated, stagnant water, or to the poisonous exudations of the worm, I contend is immaterial, and am agreeable and inclined to attribute it to the water, but also maintain that the worm is instrumental in producing the causes that result in defective drainage. An examination of the soil that has been "processed" in its passage through an earthworm reveals the fact that it has (when dry) been reduced to a state of impalpable fineness. This soil, in combination with the mucous-like castings of the creature, forms, when moistened, a paste that is practically impervious to water. Such a paste (and a very gummy one it is) forms in the sides and bottoms of pots. Such a paste forms as well in soils once porous and open, rendering it cake-like and sticky the moment it becomes the resort of these vile intruders. Feeding upon the humus in the soil, it is not improbable that they restore a *quid* for every *quo* in the shape of free ammonia that is immediately available for plant use. Yet if the manurial value of their excreta rated high, in the writer's opinion, and in the light of past experience, it would offer no compensating equivalent for the undoubtedly bad mechanical influence they exert upon the soil of field, farm or garden.

WM. S. LYON.

Los Angeles, May 11, 1895.

### Almonds after Vines.

TO THE EDITOR:—Will an almond orchard do well on ground that has previously been occupied by a vineyard?

Oakdale, Cal.

J. W. JONES, JR.

Yes, if the soil is light and well drained enough to suit the almond. Vines will thrive on heavier soil than pleases an almond, and standing water in winter which would kill almond trees does not injure a grape vine.

## THE DAIRY.

### The Cow's Digestive Organs.

The cow's alimentary system is highly developed. The stomach and intestines average in weight 14.3 per cent of the whole body, and measure from twenty to twenty-two times its length, or an average of 150 feet, 120 of which are small intestines. The rumen, or first stomach, occupies three-fourths of the abdomen, and has a capacity of many gallons. Its muscular coat presents fibers often transversely striated, and arranged in bands, some of which are transverse and others longitudinal, hence the rumen is divided into four compartments. The reticulum, or second stomach, hangs below the termination of the esophagus, between the rumen and the diaphragm. Its lining membrane presents a honeycomb arrangement. It terminates in the maniplies, or third stomach, which is curved and oval-shaped. The lining membrane of the muscular coat projects



or too fine. They are for work and show combined. A large, fine team well harnessed to a fine rig is a good advertisement.

Breed your trotting-bred mares with merit to good coaches for fine carriage and road horses and they will all sell for good money, and you will have no rubbish left on hand that cannot be sold. A beautiful form, gay appearance, sound and well-formed limbs, a high gait, good size, a fine stepper, an intelligent countenance, a willing worker, free from nervousness, is what will sell your road horse, and not speed.

The prospects were never better for the special-purpose horse nor poorer for the plug or general-purpose horse. The plug and chunk have been over produced. General-purpose horses and streeters, which have been used extensively to operate our city street cars have been superseded by the electric motive power. This change has been very general in our large cities, and the change so sudden that it has thrown a vast amount of this class of horses on the market at once, which has caused a glut, followed by a decline in price from which the writer can see no recovery. But as this class of horses have not been paying the producer a reasonable profit for their production we can say "good riddance to bad rubbish," and turn our attention to the special-purpose horse of our choice, be they heavy, draft, city express, coacher, or roadster, which always have paid a good profit above cost of production to those who have kept pace with the fast-growing demand for larger, finer and better horses.

In the writer's opinion there is but little difference which class of these horses we breed, as regards profit. But we must raise horses and not things and call them horses. We may fool ourselves, but we cannot fool the consumer. If we expect to get good money out of the horse we raise for sale we must consult the wishes and ideas of the consumer. A close watching of the market to know what is most in demand and what brings the largest profit above production, is certainly the best guide for the producer of horses for sale.

#### Values of Fine Horses Advancing.

We have repeatedly noted, says the *Breeders' Gazette*, the strong upward tendency that characterizes the market for "toppy" horses, and especially the ease with which horses of this kind are absorbed by both foreign and domestic buyers at this market. While there is a big trade in finished horses at Chicago, yet the majority of them do not reach the ultimate buyer at this market, but are bought by dealers to be resold for actual use in the East. The New York market is the best thermometer of the trade, especially in high class light and heavy harness horses and saddlers. A large number of horses ready for immediate use have already been marketed this spring in that city and more are yet to come forward. We have reported a few of the more important sales, which show that the market displays a very strong tone. On this point the New York *Herald* of May 5th, reviewing the past week's market, has the following words:

"Recent sales of horses, both at public auction and privately, and the general reports from firms in the carriage business, may be taken as evidence that the worst of the era of depressed values and slack demand in these trades is at length over; and just as flood tide follows on ebb we should now get a steady and continuous improvement in these two very important local trades. The most gratifying feature of this rise in values is that it has extended itself to all grades of horse stock known to this market, and whether it be a heavy work horse, a trotting roadster, an ordinary business horse or a high-stepping carriage horse or saddler, every man who buys one has to give considerably more than was the case three or four weeks ago."

In all probability the close of the market will be much stronger than the opening, as the season generally is from two to three weeks late and purchasers for spring use are consequently just making known their demands. The prospect for horse-breeders who have good horses to market this year is very good.

And this demand is bound to continue and increase. Nothing is more certain in the future than that horse-breeding conducted with a view toward securing quality rather than in such manner as leads to the production of nondescript "skates" will prove remunerative. And yet there doubtless are many who will again refuse to breed the mares even to high-class stallions. None are so blind as those who will not see.

#### A Future for Draft Horses.

I think there never was a better time than now for farmers to start in and try and raise a few first-class draft colts, for one extreme always follows another, and there is bound to be a shortage of right good first-class draft horses in five or six years from now, and the man who starts this season and procures good, sound, healthy, high-grade draft mares that have size, quality, style and action, with good feet and good kind dispositions, and that are graded up from some of our best and leading draft breeds,

and breeds them to a right good, sound, registered draft stallion that has size, quality and action, with good heavy bone and good feet and a good, substantial color, can't miss it. The breed may be selected according to a man's own choice or notion, and where it is convenient the stallion and mares ought to be of the same breed, unless a man has good and substantial reasons for cross-breeding. The man who starts in now and breeds thus is the man who will come out ahead in five or six years from now, for according to all appearances and prospects there will be a good demand for good draft horses that have size, quality and action in 1900, and they will bring a good fair price.

I am breeding and handling Belgian horses, as they are the breed that suits me best and they do well in our locality and climate. I like them, for they are low-down, heavy, solid blocks, with plenty of size, bone, quality and action. They are very easy keepers and mature young. My mares are a cross between Belgian and Percheron and I am breeding them to a Belgian stallion. I am having good success with them and my young colts are showing well.—F. A. Eckstein, in *Breeders' Gazette*.

## THE IRRIGATOR.

### Current Notes on Irrigation.

Items favoring irrigation progress compiled for the *RURAL PRESS*:

Water is admitted to be king in southern California.

Public sentiment in favor of irrigation is growing rapidly.

A little water will accomplish great results—at the right time.

Cover your fields with irrigation water as well as your house with an insurance policy.

The New York *World* of March 3, 1895, contains a four-column illustrated article on irrigation.

The *Century Magazine* for May, 1895, contains a fifteen-page article on irrigation, finely illustrated.

Irrigation is not a substitute for rain. Rain is a substitute for irrigation, and a mighty poor one at that.

Large crops can be raised upon irrigated land, and at the same time mortgages can be raised off the land.

Egypt, so far as history can inform us, was the first to learn and the first to teach the great art of irrigation.

The size of sugar beets can be controlled by irrigation, and by irrigation a larger quantity of saccharine can be developed.

A small irrigated farm, wisely worked and cared for, will produce the same income that an investment of \$50,000 in Government bonds will do.

Before irrigation, land in southern California was worth, nominally, \$25 per acre. After irrigation and growing an orchard upon it, it was worth from \$500 to \$2000 per acre.

The stone age, the wooden age and the iron age are all past. This is the age of electricity and irrigation. The progressive farmer studies irrigation; the wise one applies it.

The First Irrigation System.—And the Lord God planted a garden eastward in Eden \* \* \* and a river went out of Eden to water the garden. (See second chapter of Genesis.)

The Stanislaus and San Joaquin Water Co. is now running eight construction camps and a force of nearly 500 men. Ditches, flumes, tunnels and bridges are all being rapidly pushed forward.

Forty years of small holdings and irrigation by ten thousand farmers in Utah, in the very center of arid America, has fully demonstrated that they are a safe and sure road to permanent prosperity.

The prediction is made that those who seek homes in the irrigated regions of the United States during the next decade will be those who possess sufficient capital to start and develop their own homes.

California alone, if under a highly developed system of irrigation, where all her flood waters, streams and lakes could be utilized, would support a population of twenty-five to thirty millions.—*Rural Californian*.

If California expects to become as wealthy and powerful, as great as nature intended her, she must do so by cutting up her large land holdings into small tracts and bring her acres under irrigation.—*Rural Californian*.

Flax-growing by irrigation for both fiber and seed promises to be profitable. A Kansas farmer produces 1100 pounds of fiber, worth 11 cents, and 28 bushels of seed, worth \$1.20, making \$154.60; cost, \$48; net profit, \$106.60 per acre.

Forty acres of irrigated land in the San Joaquin valley, worth from \$75 to \$100 per acre, will support a family with less work and greater comfort than can be done upon a 640-acre wheat farm, without irrigation, valued at \$25 per acre.

There is sufficient irrigable land in the United States, which is worthless without irrigation, to support a population equal to that of the entire United States at the present time. The success made by irrigation in Utah and by the colony at Greeley, Colorado, clearly demonstrates this fact.

Irrigation by electricity is to be given a practical

test in the San Bernardino valley, at an estimated cost to the farmer of \$1.15 per month, or about \$7 per acre per year. Water rights in the same vicinity would cost from \$100 to \$150 per acre, which demonstrates the economy of the electric plan.

Fruit, like beef, mutton and poultry, is much better when it makes a quick and unchecked growth. A drouth will check the development of fruit and make it small, dry, woody and flavorless. Judicious irrigation makes it large, crisp, juicy and of excellent flavor, and it is the only thing that can be depended upon to invariably do this.

Men are starving to death in the semi-arid region like the San Joaquin valley, not because they irrigate but because they do not. The wheat-grower is getting poorer because he has a big farm and raises wheat in competition with the pauper labor of Egypt, India and Russia, instead of owning a little irrigated one and raising what he can eat and enjoy and have something to sell.

In Egypt camels are staked out by the fetlock and not by the head. When stretching for feed beyond them they are brought to their knees. This adds the length of the leg below the knee to their reach. Everything within reach is eaten to the ground. Beyond the reach allowed by the rope lengthened by the leg, neck and tongue stands a perpendicular wall of irrigated alfalfa five feet high.

Too much water is bad. A careless orchardist overdid his irrigation and made a nuisance of himself and injured the alfalfa field of his neighbor below him. This thoughtful man kept control of himself and advised the use of such fertilizer as would benefit his own alfalfa field the most. The advice was followed, and, as anticipated, the one below soon had it run out over his own field, where he received the full benefit of it.

It is no longer necessary in southern California to argue the desirability of irrigation. Even in San Diego county it is at last admitted, I believe, that absolute certainty of fruit crops is only assured where water is available. Sections that have done well without irrigating facilities have accomplished so much more with water that there are very few who, from choice, will depend upon the rainfall to perfect their crops.—E. W. Holmes of the Riverside Press.

Ninety per cent of the Mormon people are land owners or heirs of the soil. Their average annual income for forty years has been \$1357.25; expenses, \$875; surplus, \$482.25. This could not have been but for irrigation. Not five per cent of the remaining population of the United States are land owners. There are room and opportunities yet within the United States for from fifty to one hundred million people to do what the Mormons have done—except the polygamy part.

Disadvantages of a Square Acre.—A square acre plowed with a fifteen-inch furrow requires 84 rounds and 336 turns, while the same area, in the form of a parallelogram, 2 by 80 rods, requires only 13 rounds and 52 turns. In the one form it will take twice the time to plow that it does in the other, to say nothing of the serious tramping which the square piece will be subjected to. Remember and apply this when, after irrigation, the present large holdings of unirrigated land are being subdivided.

The foregoing items are compiled from the *Irrigation Age* and other journals by a resident of San Francisco who has considerable agricultural interests, and who desires the promotion of all means promising increased prosperity and development of our Western resources. The items which he selects are in the main safe and conservative. Some are apt to convey a wrong impression, though perhaps absolutely true in themselves as isolated cases. For example, the returns from flax in Kansas. A net return of \$106 per acre for flax need not be expected by any one. The fiber is figured at eleven cents per pound. As things now are in this State, flax straw cannot be sold at any price. We instance this item merely to emphasize the fact that those who undertake propaganda in favor of irrigation, or any other good and promising enterprise, should reject extreme instances and proceed upon a fair average basis, which is good enough for any reasonable being.—Ed.

#### One Irrigation District.

The Escondido district, organized under the Wright act, expects to irrigate this season. On April 23d water was turned into the storage reservoirs from the San Luis Rey river, by means of ditch and flume fifteen miles long.

The dam is a rock fill to be seventy-five feet high and is rapidly approaching completion. Work on it was begun last July.

The distributing system is well under way and nearly all lands calling for water will be supplied this summer. The cost to date has been \$250,000, and bonds have been sold to increase this to \$350,000. E. F. Tabor is district engineer. The district contains 13,000 acres of rolling hills and valley lands



inwards, forming lamina or rings. The abomasum, fourth or true digestive stomach, lies to the right of the rumen. It commences at a rather wide opening from the third stomach, and terminates at the pylorus. The mucous membrane presents folds varying in their direction in different parts, and bears follicles where gastric juice is secreted. There are various theories as to the act of rumination, and the manner in which the different cavities are related to this and other digestive processes.

Rumination consists in returning to the mouth a pellet of slightly masticated food, which for some time has been macerating in the rumen. Coarse food may be remasticated as many as four or five times before becoming in a fit state to pass on to the next stomach. This fact should teach us a valuable lesson with regard to the value of prepared food, not because it is rendered more nutritive, but because it entails a less waste of force in its preparation. A considerable proportion of water and other liquid foods pass direct into the third stomach, and from thence to the fourth, and hence are taken up by the absorbents, and pass direct into the circulation. We have corroborative evidence of this through the action of medicinal drenches and the use of impure drinking waters on the milk of the cow. In common with that of most mammals, the medicinal effects of certain well-known drugs are capable of being conveyed through the milk of the cow to other animals and even to man himself. While the quality of the drinking water is as important a factor in the production of first-rate dairy produce as is the food itself, gastric digestion in the cow presents no special features; chymification is performed rapidly. The omasum, or third stomach, secretes an acid juice which materially assists in the conversion of the albuminoids into peptones. Gastric inflammation of the mucous membrane of the third stomach is caused by impaction resulting from the free use of indigestible food. This is a frequent and dangerous malady among dairy cows during the spring months, where the stock are chiefly fed on dry, unprepared food.—Gilbert Murray.

#### Milking.

Under the head of milking may be comprised the cleanliness of the animals and the manner and time of milking. The introduction of separators practically revealed the necessity for cleanliness in a cow stable. At the termination of the process of separating, a peculiar slime is to be found adhering to the sides of the separator. Its color varies from gray to green, brown and even black. When examined under the microscope, germs, portions of plants, hair, soot and linen have been discovered; and when exposed to the air for a short time, it putrefies rapidly. It consists in reality of dirt, and as such must injure the quality of milk and butter. In order to keep the milk as free from the dirt as possible, the cows ought to be rubbed down with a straw whip on their right hindquarters and udders before they are milked in the morning. During the day it is necessary to currycomb and brush each animal. The best kind of brush to be used is one made rather more open than an ordinary horse brush, but of the best hog bristle. The animals are first scraped over with the currycomb and then brushed. In addition, the udders of all cows ought to be washed and dried before milking, and the milkers ought to dip their hands in cold water after milking each animal. Care must be taken to completely empty the udder when the cow is milked. In large establishments, where several milkers are employed, it is advisable to select one or two of the more careful persons to strip the cows after they have been milked. By this means the carelessness of some of the milkers may be corrected. Each milker should have his own stool and pail marked or numbered, and should be held responsible for the cleanliness of the same. The milk ought to be poured from the pail into the milk can through a double hair-strainer, and the milk cans ought, if possible, to be placed outside the cow-house.—R. H. Beamish.

#### How Swine Thrive on Milk.

Milk is a perfect food for young pigs, it being what nature has provided. It contains all the nutritive elements called for by the system, in the proportions needed, and in such a condition as to be more easily available.

Cow's milk has a nutritive ratio of about one to four, just what the young pig wants; but if we remove the butter fat in the form of cream, we reduce the nutritive ratio to about one to two, making a food much richer in the flesh-forming elements—the casein or cheesy part of the milk—than the pig requires.

If, then, we mix this skimmed milk, rich in flesh formers, with grain, rich in fat formers, and see that the pig gets enough mineral matter in the form of bonemeal, wood ashes or the like, we shall be able to produce pigs of well-developed muscle and bone of good fiber, and we believe no cheaper pig food can be produced than this combination.

Hence, we see no reason why pig breeders should not become dairymen as a means of producing the

most healthy and vigorous swine and the dairymen become breeders and feeders of pigs as the best means of utilizing the wastes of the dairy.

### THE POULTRY YARD.

#### How Much to Feed.

The *Poultry Keeper* says it has tried to show that it is impossible to fix upon any quantity of food for a daily allowance. If it does not name a quantity, readers get angry and say "tell us about how much." So the editor decided that a quart a day for twelve hens is about correct—that is, for some hens, and sometimes.

Mr. A. C. Butler, of Brooklyn, N. Y., tried a quart a day for twelve hens, and here is what he writes:

"I find that my hens will not eat a quart of mixed food a day, and I conclude that I may overfeed them if I give so much. My hens are cross-bred Leghorns and common stock. I find that some days they eat more than at other times."

So, Mr. Butler finds that they eat more some days than at other times, and a quart a day is too much. Now, here comes Mr. G. W. Ard, of Haglehurst, Miss. Let us see what he writes:

"From experience, I find that it takes a great deal more than a quart a day for twelve hens—common country hens. My stock are on bare yards just now, and I feed up, starting at a quart a day, and find that a quart mash of wheat bran, ground oats, corn and wheat, as a morning meal, and green rye at noon, and a quart and a half of corn at night, brings the eggs. I gradually increased the quantity and noted results, and there was a greater egg increase each week. I feed the same amount a week at a time. On alternate mornings I give a quart of green bone, and on alternate nights I give oats or wheat instead of corn. This is just what the hens will eat, and they leave none."

It will be seen that Mr. Ard feeds two quarts or more, for he found that a quart was not enough. We venture to say, however, that before he is aware of it, his hens may suddenly stop laying, being very fat. It is only a matter of time with such heavy feeding, especially if a meal is given during the noon hour.

Now, here are two cases in which it was attempted to feed a certain quantity of food per day to a number of hens. One found the amount too much and the other discovered that it was insufficient.

Give half as much as they will eat in the morning, nothing at noon, and a full meal at night. It may be a quart a day for your hens or two quarts for your neighbor's hens. No two hens are alike. The same flock may eat more to-morrow than it does to-day.

#### Feeding Broilers.

Mr. G. W. Pressy, in a lecture on poultry, says this about feeding broiler chickens, and applies, he says, as well to all young chickens:

"Very much depends upon the kind of food given to chickens, how prepared and when given. Of course, the principal food must be the different grains. Corn alone will not make a good chicken; it is most valuable for its fattening and warming qualities. Wheat contains the material for bone, feathers, etc.; oats for muscle. So we feed corn two parts, wheat one part, oats one part, and we have a fast-growing chicken. Feed either of these grains alone and we have all kinds of monstrosities—weak-legged, sore eyed, no feathers, and every conceivable deformity. Add to these grains a quantity of meat to take the place of insects, which form a part of their natural food.

"See that they have plenty of sand or gravel. They have no teeth, and must have this gravel to grind the food in the gizzard. Give oyster or clam shells, ground or pounded as fine as wheat. Keep by them also powdered charcoal; it prevents the digestive organs from becoming clogged with soured food, if they have eaten too much.

"If all these things are provided for them, and the sheds kept clean, occasionally sprinkled with carbolic acid and once a month given a thin coat of white-wash, the chickens should keep in perfect health. But if any signs of roup or other disease to which they are subject should appear, we use a liberal supply of Douglas mixture, which is simply one pound of sulphate of iron (copperas) and one ounce of sulphuric acid dissolved in a gallon of water. Dose—Two or three tablespoonfuls to each 100 chickens, in their food or drink, for each day until they are better."

#### Poultry Keeping for Women.

Perhaps the most weighty reason which recommends poultry keeping to the woman who is seeking a means of support, is its adaptability to all sorts and conditions of women. It is one of the few avocations for women in which neither "book learning" nor much capital are essential. The untutored country lass may succeed as well as the proud owner of a diploma from Vassar, and the "poor widow" with her "mite" judiciously invested, may eventually

earn as large an income as she who has her thousands with which to start the business.

Still another advantage is that a plucky woman with good health may earn more "pin money" than she needs by keeping a pen of pure-bred poultry and still find no difficulty in attending to her domestic duties, though she may be the mother of half a dozen young children.

Ella Smith, writing for the *Southern Cultivator*, says: I do not wish to be misleading, and in enumerating its advantages I do not desire to make the impression that the business is a mere trifle to learn or a sinecure to practice. No profitable business can be either. While I consider poultry keeping too pleasant and interesting to be termed arduous, still I would not advise a lazy woman to undertake it. Patience, diligence and watchful care are just as necessary in this as in any other remunerative vocation. But it certainly does not require a mountain of work to properly care for a few pens of pure-bred fowls; and the busiest woman has a few spare moments while waiting for one thing or another during the day, which, taken in all, seem to amount to little, but if spent in this way will prove very profitable.

Those who contemplate keeping poultry should, in the beginning, carefully guard against the Scylla and Charybdis upon which so many poultry keepers have been wrecked, namely, buying cheap stock and keeping too many varieties of poultry.

None but the best pure-bred fowls are profitable, and two pens of different breeds are ample for the beginner, and these should be bred exclusively for eggs until the proper care and management of them is thoroughly understood.

In making a selection from the different classes or breeds of poultry we must be governed by our circumstances, environment and individual tastes.

#### Fifty Chickens Versus One Cow.

An interesting discussion has been going on in Eastern journals regarding the relative profit to be derived from a given number of chickens and a given number of cows. While one fancier declares that fifteen hens are more valuable than the average cow, a stout dairy advocate swears by the beard of the prophet that he can make more money from one cow than any man can from one hundred hens. The results of the experiments made under varying conditions are now useful.

One farmer, according to the *Pittsburg Dispatch*, made a test with fifty chickens and one cow, and gives the result as follows: Value of milk sold from one cow, \$144.10; income from fifty hens, mostly for eggs sold, \$150.81. The cost of keeping the cow was given at \$52, while the maintenance of the hens cost \$50, and it was estimated that the value of the manure was equal for both. The former was greatly in favor of the hens in the matter of lessened labor, of care and attention, the cow requiring more time and far less agreeable labor. Numerous other experiments reported, if summarized, would probably result in favor of the hen, if taken in the ratio of fifty to one.

The chief value of the controversy has been to show that no dairy farmer should be without a fair ratio of poultry, and no poultry raiser should fail in maintaining a proper number of cows. For small, irrigated farms, intensively cultivated, nothing is better able to contribute to the family needs than cows and poultry. As many of each only should be kept, however, as may receive the best of care and attention, and pains should be taken to have only those of best blood and lineage.

Right here is where the small, well-watered and well-tilled land holding becomes so potent a factor in the upbuilding of a higher and better civilization and citizenship. Everything on such a farm must be of the best, and the man who tills his few home acres as a chemist uses his laboratory, to achieve the best results which skill and science can evoke, must necessarily climb to loftier heights than he who plods in the fruitless endeavor to cover a large area, without any approach to scientific skill, either in cultivation or management.

### TRACK AND FARM.

#### Hints for Breeders.

The following suggestions are offered by a writer in an Eastern exchange:

For draft, size, bone and soundness are essential. Without these qualities we have no draft horse. And the larger the better, and the more quality the more money we get for them. Draft horses are not for ornament, however, nor for show, neither are they for the road; they are for pull. The pull is transmitted and inherited in them with the same degree of certainty as the kick in the mule or the tenacious grip in the bulldog. Breed your largest, blockiest, heavy-boned mares to the heaviest and best draft stallion that can be found. Do not be afraid of getting them too large nor too good; they are for work.

Breed your finest draft grade mares to the finest and best-moving draft stallion for city express purposes, and do not be afraid of getting them too large



## THE HOME CIRCLE.

## The Dotted Veil.

Her dotted veil doth emphasize  
The tender splendor of her eyes;  
Its criss-cross meshes are a snare.  
The stoutest heart must needs beware,  
And safest he who swiftly flies  
Her dotted veil.

A patch of plaster here and there  
Did ladies of the court devise  
To make complexions still more fair,  
But now my lady multiplies  
This fancy, and forsooth must wear  
Her dotted veil.

And once her veil she pins and ties  
The winds may madly veer and tear,  
She steps a maiden debonaire,  
Without a thought, without a care,  
'Twixt her and fair or cloudy skies  
Her dotted veil.

Yet all's not said, for some declare  
A mine of untold wealth there lies  
In this extensive dotted snare:  
For most the oculist doth prize  
The thing that spoils my dear sweet eyes,  
Her dotted veil.

—New York Sun.

## The Flawless Hubby.

There are husbands who are pretty  
There are husbands who are witty,  
There are husbands who in public are as smiling as the morn;  
There are husbands who are healthy,  
There are famous ones and wealthy,  
But the real angelic husband, well, he's never yet been born.

Some for strength of love are noted,  
Who are really so devoted  
That whenever their wives are absent they are lonesome and forlorn;  
And while now and then you'll find one  
Who'll try not to nag and grind one,  
Yet the real angelic husband, oh, he's never yet been born.

So the woman who is mated  
To a man who may be rated  
As "pretty fair" should cherish him forever and a day;  
For the real angelic creature,  
Perfect, quite, in every feature,  
He has never been discovered, and he won't be, so they say.

—Thomas Bailey Aldrich.

## Our English Cousin.

Mother was right when she said we boys were a little proud of the fact that our father was the "Honorable Francis Berkeley," and heir but one to an English title. She was right here, I say, but we were all far prouder that we were free-born Americans, and there is nothing we love more than "Old Glory," our precious red, white and blue emblem of freedom and equality.

We did not think much of England and her unjust laws, that gives everything to the eldest son, and we gloried in the independence that had caused father to break away when he found he received nothing when the wealthy old lord his father died, and, with a few thousands left him by his mother, came over and settled in Wisconsin.

He had enough to buy a fine prairie farm in Walworth county, and to stock it and put the buildings in repair. And he has often told us how forlorn he felt when he took possession all by himself.

His brother, Lord Dorne, had said to him when he came away, "Now, Francis, if you decide to marry come home and choose a wife from among your own class," but father just smiled to think how out of place those dainty, high-born dames would be in the free, unconventional life of the West.

He never thought for a moment of following his brother's advice, so when by and by he fell in love with sweet Martha Tuft, a dressmaker, he did not hesitate to woo and win her. She is just the sweetest, dearest little mother that ever blessed a home, and father has never regretted shocking his aristocratic relations by marrying what they call a "native." Mother often says laughingly that she has no doubt they really believed she is an Indian, and she has never allowed a picture of herself to be sent.

That is, never to her knowledge, but Cecil, our eldest brother, has a kodak, and one day caught her with her arms full of flowers and all her bright hair tumbling about her shoulders, and it

made such a lovely picture when finished that, with father's permission, he sent one to uncle, and mother never knew of it till long afterward. We were all so proud of her and loved her so dearly, and you would not wonder could you have seen her loving pride in her big boys. For there are four of us, all stalwart and well grown, save Cecil, who is slender and graceful, and the image of the late Lord Dorne, our grandfather.

The present lord has but one son, the Viscount Beverly. He and Cece had corresponded for several years, and we had none of us a good opinion of him, he seemed so opinionated and conceited, and so puffed-up by his rank. So when early last spring uncle wrote that he and our cousin were coming over with a party of capitalists who were negotiating for the purchase of a number of pulp mills in Wisconsin we were none of us much pleased with the idea.

Mother laughed at our rueful faces and bade us remember that anticipations often lead one astray, and that we had better wait till we saw our cousin ere making up our minds concerning him. They arrived rather unexpectedly one stormy night in mid-March, a letter sent from New York to notify us not making its appearance until several days later.

We fell in love with uncle at sight, from the hearty, affectionate greeting he gave father and the sweet courtesy with which he treated our mother. When father presented his boys, a little proudly, he shook hands cordially and heartily, exclaiming,

"What a handsome lot of young giants you have, Francis, but Cecil here is all Beverly," and you may be sure this last pleased Cece immensely, for he is secretly proud of the fact which he has long known.

During all this Viscount Beverly had been a little neglected by all save mother, and I saw by his face that he resented it. This disgusted me, for we boys take pleasure in always placing our father first, and his ill nature seemed to me to betray smallness, a quite un-American trait.

Another thing increased our prejudice; we all noticed how disagreeable his face looked when mother called him Rupert. She had addressed uncle as Lord Dorne, and I suppose he thought she ought to have given his title also. Well, perhaps she ought, but we knew nothing of English ways, father never having thought it necessary to teach us, and they knew nothing of American manners, so things could not help going wrong now and then.

He was a fine-looking young fellow and the resemblance between him and Cece was striking, as far as face and form was concerned. We tried our best to make it pleasant for him, but as the days went by we could see he did not enjoy our free and hearty hospitality, and we tired of his superior airs. I heard his father remonstrate with him once on the folly of bringing his lordly ways into a land where all was freedom and equality, but it did no good. He was as stiff and priggish as ever the next day.

As the time went on we came to love uncle as heartily as we detested Rupert, but we were careful not to betray our dislike to his father. The one trait we had the least patience with was that he knew everything. He could teach us more about our own affairs, or thought he could, than we knew ourselves. And nothing was ever brought for his entertainment but he had to tell of something far finer he had seen at home in England. The worst of it all, however, was, he would not believe anything we told him, and few boys can patiently endure to have their word always doubted.

If it had not been for mother we would have teased the life out of him, or at least joked him out of his conceit. But she kept us always reminded that he was our guest, and had been differently brought up. But as the first of April approached, and he declared in his lordly manner that no one could fool him; that many had tried it, but no one had ever "got a rise out of him" yet, we had been angels to forego the attempt.

Now, as I said, Rupert would never

believe anything we boys told him of the wonders of our land, but he would sit by the hour and listen to the tales old Karl Schimberger, father's head man, would relate of the strange things he had seen since he had left his native land. How much our cousin believed of these yarns it is hard to tell, but he seemed to think the old man could have no object in humbugging him, so we decided to get Schimberger to help us. He willingly agreed, for he was a genuine wag in his way, so the next time Rupert came into the kitchen he regaled him with fish stories, mentioning among other facts (?) that a species of fish we call bull-heads come out of the water every night to eat buckwheat in our back field. Rupert laughed at this, whereupon the old man waxed indignant.

"You vas hear of feesh dat dravel on der dry ground, hey?"

"Oh, yes."

"Vell, dese be dose, eh? den vy dey not eat, hey?" and not another word could Rupert get out of him that night.

The next day was the first of April, but Rupert had forgotten it; Karl took care to let him see him start across the field with a measure of buckwheat, and on being asked where he was going, replied, sulkily, "How vas dem feesh to eat if I not feed dem?"

With a look of mixed unbelief and astonishment Rupert accompanied the old man and watched him scatter the grain along the little stream. The ice was gone, and the Dutchman pointed out several shadowy forms lurking in the shallows that, as he said, were waiting for darkness to come up to feed. Afterward in telling us of it, he said the boy's face (he was eighteen) was a study in its bewilderment, and he was sure he would go when night fell and see for himself if there was any truth in the matter. Feeling confident such would be the case, Jerry and I shut ourselves in the workshop, and made a transparency which, when lighted up, would show only the words "April Fool!" in letters of fire, and then waited with what patience we could for night.

Several times during the day we who were in the secret were driven to laughter at seeing Rupert gazing in the direction of the creek with a most undecided, puzzled expression. He seemed unable to forget the matter or make up his mind what to do; so after supper we beguiled him over to a neighbor's, where there were some nice young people, and we passed a very pleasant evening. Just as we were starting for home a little boy ran in to say, "Sandy McDare, a fellow who lived a little beyond, was drunk and abusing his family, and would we boys come and make him behave?" The summons was nothing new, and of course we must go, but equally of course we couldn't take Viscount Beverly into such a scene, so he settled the matter by saying he could easily cut home across the lots alone.

That was just what we wanted, but we were careful not to let Cece note the fact, for we seldom let him into the secret of any bit of fun we had on hand. So when we proposed he go on and settle McDare's case by himself he willingly agreed, and we ran quickly to intercept Rupert and have a little fun at his expense.

Now we always followed the road a short distance in going home from Collipp's past a piece of woods, and then cut across a calf pasture to the house, thus saving half a mile, and we were sure Rupert would do the same. By moving rapidly we reached the corner of the wood next the pasture before he came along, and I, being the tallest, stationed myself in the deep shadows with a white sheet wrapped around me.

Jerry and Frank in similar ghostly attire crouched in the shadow of the fence farther on, and so we waited. It was not very dark except in the shadows, for it seemed as if all the stars were out. Presently Rupert came sauntering leisurely along, and I knew by the tune he was whistling that his thoughts were afar in "Merrie England."

As he came opposite me on entering the pasture, I moved slowly, making a dismal noise. He stopped, looked at me

sharply a moment, then took a step or two toward me. I was just beginning to laugh to myself over the failure of our "scare" when all about in the dark shadows between us there arose the most unearthly noises I ever heard.

Then up sprang a dozen or more yearling calves, which had been quietly huddled together in the fence corner. Away they ran down the field, bleating, snorting and bellowing with terror, Rupert racing along before them until he reached and vaulted the fence on the other side.

The sight convulsed me with laughter, which was in no wise allayed when, just as the calves disappeared in the darkness, Jerry and Frank crawled to their feet, groaning and sputtering, and rubbing their bruised arms and legs, for the calves had run directly over them as they lay hidden by the fence. I laughed until I cried—until both boys set upon me and I had to make for the house to escape their indignant wrath.

We made for the kitchen by the back way, and when we entered the light and I could see them I thought I should die from my efforts to keep from laughing.

Jerry had a deep scratch the whole length of his face, while Frank had a dozen on hands and face. Their clothes were torn and soiled, their hats battered out of all shape—such looking objects as they were! Such an ending to our fun—it was more than human nature could bear, and when I began once more to laugh the two were forced to join me, and we made the roof ring. Hearing some one coming, the boys ran up the back stairs to repair damages, while I went to the parlor and had to listen while Rupert gave a humorous account of his adventure with the calves. All his stiffness and precision was dropped for once, and when he concluded with, "Oh, auntie, you should have seen me run and clear that fence," we all laughed uproariously.

"But," began father, in a wondering way, "what could have made the calves run like that at that time of night?"

"Oh, something must have frightened them," replied Rupert with a sly look at me, which proved that he mistrusted I knew as much of the matter as himself.

Neither Jerry nor Frank showed up, and Cece did not return till everybody had retired. I went to the room I shared with the two former, but not to go to bed until convinced our cousin had given up all idea of going to see if bullheads really came out of the water to eat buckwheat. I was convinced he would, and I was right, for about eleven o'clock he very quietly let himself out of the house, and by the dim starlight I saw him start across the field. I was not long you may believe in awakening Jerry, and quickly arranging our transparency, we followed.

It was pretty dark, a thin film of cloud dimming the cool radiance of the stars, but as we neared the spot we were amused to see him strike a match and move slowly along the bank in a crouching position. Stationing ourselves so he was nearing us all the time, we waited until he had lighted a half-dozen matches and examined a long stretch of stubble. Then as he straight-

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up, feeling no doubt pretty wroth that he had been so foolish, I made a noise and he turned his head to see "April Fool!" glaring at him in letters of fire. "Sold!" he cried, with a shout of laughter that made the echoes ring. "I give up, boys. Won't this be a rich thing to tell mother and the girls when I get home."

Of course we joined in his laughter, but feeling that his unexpected way of taking the joke had almost given him the best of it here as in the "ghost" performance. We kept that secret to ourselves, however, until he and uncle had gone back to England, and we rather wish we had never told, for we shall not soon hear the last of it.

They stayed several months though, and no one could ask for a jollier, pleasanter companion than Rupert was after the night we so ruffled his dignity, and he found there were "natives" cute enough to take in a titled Englishman.—Rye Johnson, in the Home.

#### Fashion Notes.

The waist of a black crepon dress is made with a plain black blouse front, opening on either side to show plaid silk with plaited frills down either side, giving the effect of a white box plait in the middle. The pointed yoke is of white satin, covered with an applique of black lace and jet.

A blue and black shot crepon is made with a slight blouse effect in front and a wide turn-down collar of blue satin, outlined with jet and steel passementerie and trimmed on either side below with steel buttons and simulated buttonholes in black satin. The vest of finely tucked muslin, with a band of embroidery down the center. Steel buttons appear again on the sleeves, which are cut in two points over the band, with a frill of fine embroidery inside.

Checked and finely striped silks make pretty waists for crepon and satin skirts, but they are made with tucked muslin vests with satin ribbon collar and belt, or quite plain and worn with a wide lawn collar. Little frills of silk down either side of the front are very effective.

Among the smaller girls the empire waist vies with the blouse for first place among the smaller frocks, and they are trimmed round or up and down with rows of insertion, and have jaunty bows of ribbon on each shoulder and short puffed sleeves. Piques, lawns, nainsooks, zephyrs, silk gingham, colored linens and Swiss muslins are all popular for summer wash dresses, and embroidery is the favorite trimming. Pique comes in lovely pale shades of blue, yellow and pink, and is made up into pretty afternoon gowns with plain skirts and empire waists, which have a yoke and belt of white embroidery.

Plainer dresses are made with a blouse waist and wide sailor collar, and little cloaks are supplied for toddling infants. Stunning little reefer jackets of white pique are made with wide collars, square across the back, and deep, square ends on either side of the front. They are trimmed with a band of colored linen or embroidered insertion, and are worn over white pique skirts.

#### A Study in Construction.

A teacher in one of the lower grades of a city school was endeavoring to impress upon her pupils the fact that a plural subject takes a verb in the plural.

"Remember this," she said; "girls are, boys are; a girl is, a boy is. Now do you understand it?"

Every hand in the room was raised in assent.

"Well, then," continued the teacher, "who can give me a sentence with girls—plural, remember?"

This time only one hand was raised, and that belonged to a pretty little miss. "Please, ma'am," she said, with all the assurance of primitive reasoning, "I can give a sentence. 'Girls, are my hat on straight?'"—Cincinnati Tribune.

#### Gems of Thought.

Fame is an undertaker that pays but little attention to the living, but bedizens the dead, furnishes out their funerals and follows them to the grave.—Colton.

Quick is the succession of human events; the cares of to-day are seldom the cares of to-morrow, and when we lie down at night we may safely say to most of our troubles, Ye have done your worst, and we shall meet no more.—Cowper.

Believe me, sir, those who attempt to level never equalize. In all societies consisting of various descriptions of citizens, some description must be uppermost. The levelers, therefore, only change and pervert the natural order of things; they load the edifice of society by setting up in the air what the solidity of the structure requires to be on the ground.—Burke.

It is a good plan, with a young person of a character to be much affected by ludicrous and absurd representations, to show him plainly, by examples, that there is nothing which may not be so represented. He will hardly need to be told that everything is not a mere joke, and he may thus be secured from falling into a contempt of those things which he may at any time happen to find so treated.—Whately.

Cicero says that "to study philosophy is nothing but to prepare a man's self to die." The reason of which is, because study and contemplation do in some sort withdraw from us and deprive us of our souls, and employ it separately from the body, which is a kind of learning to die, and a resemblance of death; or else because all the wisdom and reasoning in the world does in the end conclude in this point, to teach us not to fear to die. And to say the truth, either our reason does grossly abuse us, or it ought to have no other aim but our contentment only, nor to endeavor anything but in turn to make us live well, and as the Holy Scripture says, at our ease. All the opinions of the world agree in this.—Montaigne.

Youth is the time of enterprise and hope; having yet no occasion of comparing our force with any opposing power, we naturally form presumption in our own favor and imagine that obstruction and impediment will give way before us. The first impulses rather inflame vehemence than teach prudence; a brave and generous mind is long before it suspects its own weakness or submits to sap the difficulties which it expected to subdue by storm. Before disappointments have enforced the dictates of philosophy we believe it in our power to shorten the interval between the first cause and the last effect; we laugh at the timorous delays of plodding industry, and fancy that by increasing the fire we can at pleasure accelerate the projection.—Dr. S. Johnson.

#### Smart Girls.

There is a young man attending the University of Pennsylvania upon whom the "turn" was called" very cleverly the other day. He came to the university to pursue post-graduate studies from a college in a small but distinctively college town. While attending that institution he found time to cultivate the acquaintance of a number of the prettiest girls in the village, and the idea took possession of him since he came to the Old Penn that the portraits of all his old "flames" of other college days would add much to the adornment of his quarters. So he penned a request to the fair creatures who lingered most in his remembrance for copies of their photographs. He got them all, too, the other day, but in a form he little expected. The dear girls, on receiving his request, put up a job on him. Eight of them visited a photographer's in a body and had a group taken, showing only the back of their heads and shoulders. One of these pictures was mailed without comment to the fresh university man. He didn't get the picture framed for his room.

#### DOMESTIC ECONOMY.

##### Hints to Housekeepers.

Avoid the frequent use of soft, sloppy foods and of soft bread. Give the teeth something to do, if you would have them grow strong and keep clean.

It will be well, when cane-seated chair bottoms have "sagged," to make them as tight as ever by washing them with hot soapsuds and leaving them to dry in the open air.

Do not attempt to extinguish the flames of blazing oil with water; it will only make them worse. Pour corn meal or flour quickly over them, or throw over a rug or anything handy that will exclude the air.

A remarkable degree of brilliancy may be imparted to windows by cleaning them with alcohol and whiting. This will remove the most obstinate paint spots. For ordinary window washing a little kerosene in the water is an effective brightener.

To cleanse glass bottles that have held oil, place ashes in each bottle and immerse in cold water, then heat the water gradually until it boils; after boiling an hour let them remain till cold. Then wash the bottles in soapsuds and rinse in cold water.

Steel knives or other articles which have become rusty should be rubbed with a little sweet oil, then left for a day or two in a dry place, and then rubbed with finely powdered, unslaked lime until every vestige of the rust has disappeared, and kept in a dry place wrapped up in a bit of flannel.

Mrs. Richard Watson Gilder, wife of the editor of the *Century Magazine*, is reported as saying that she hopes none of her daughters will ever have any special talent for anything but being nice women, so opposed is she to the "new woman" type. She herself was once a successful painter, but gave up her art because she thought she must neglect either it or her family.

Bread crumbs rank among the house-cleaner's best friends. Crushed to a coarse powder they may be used to clean delicate lamp shades, screens, show cases, scarfs, and the bolting-cloth trifles dear to the heart of the decoratively inclined. Bread crumbs will also remove grease spots from wall papers, and are, indeed, invaluable in freshening wall papers that have become dingy.

Dr. Bruce Low of the London Health Board advocates the exclusion of domestic pets from sick rooms where there are patients suffering from contagious or infectious diseases. A startling instance of the spread of diphtheria by cats was discovered by Dr. Low, who found that the cat owned by a certain family had licked up some diphtheritic matter from the floor, and spent the evening, after its usual custom, with neighboring cats on the back fence. A few days after this a neighbor's cat was sick, and "the poor kittle" was tenderly cared for by four little girls, all of whom a little later had diphtheria. Food that has been in the sick room should not be given to animals, nor should they be permitted to lick dishes that have been in a room where there is a case of diphtheria.

In washing embroideries done with crewels on a foundation of linen or crash, the first time bran water should always be used to set the colors. To prepare the water pour a gallon boiling hot over a pound of bran. Let the bran soak in the water a day, stirring it occasionally, then stir it well. Put the article to be washed in the water when it is lukewarm, pressing and

squeezing it through the water until clean. Do not think of wringing dry, but press out all the moisture possible and dry in a warm place without exposure to sunlight. When it is still damp, lay the right side on a flannel and press on the wrong side. Use only the best crewels if you expect them to wash well.

##### Domestic Hints.

**CARROTS FLEMISH WAY.**—Boil six or eight good-sized carrots until tender. Cut them into stars or dice, then stew them with five small onions, a sprig of parsley chopped and a little salt and pepper, three-fourths of a pint of good gravy, or a little melted butter. Serve very hot.

**BUTTERED EGGS.**—Melt four ounces of butter. Mix with four eggs well beaten, leaving out the whites of two. Stir it over the fire till mixed. Make some toast and spread the slices with anchovy paste, then put on the egg mixture lightly with a fork. Cut the toast in four pieces.

**DRESSED POTATOES.**—Take some large, smooth potatoes, wash thoroughly and roast in the oven. When done cut off the tops and carefully scoop out the inside. Rub this through a fine sieve and add a tablespoonful of grated cheese, a dash of cayenne and salt. Melt two ounces of fresh butter in a stew pan, put in the potato and make it hot; fill the skins of the potatoes with this mixture. Set them in the oven for a few minutes and serve.

**GROUND RICE PANCAKES.**—Set a pint of new milk in a very clean saucepan, and when it is scalding hot stir in two tablespoonfuls of ground rice previously mixed, smooth in one-quarter pint of cold milk, keep it on the fire till it thickens, but do not let it boil, put it into a bowl to cool, stirring in gently one-quarter of a pound of fresh butter. When cold add two ounces of sugar, a little nutmeg, and four eggs well beaten, with a pinch of salt. Drop enough of this mixture into as little lard as possible, and fry it a nice light brown. Sift sugar over them, roll them and serve with lemon cut and laid around the dish.

**BREAD FRITTERS.**—To a quart basinful of stale bread, broken small, put a quart of boiling milk, cover it for ten or fifteen minutes. When quite soft beat it with a spoon until smooth, add two well-beaten eggs, half a nutmeg grated, a tablespoonful of brandy, one of butter and a little salt. Beat it light. Make an omelet pan hot, put in a small piece of butter, and when hot pour in sufficient batter to run over the pan; let it fry gently. When one side is a fine brown turn and brown the other. Lay on a hot plate, put butter, sugar and a little nutmeg over it; lay one on the other, cut them through in quarters and serve them hot.

##### Trouble at the Last Turn.

"There is too much system in this school business," growled Tommy. "Just because I snickered a little the monitor turned me over to the principal and the principal turned me over to paw."

"Was that all?"

"No, paw turned me over his knee."—Indianapolis Journal.

"Suppose, now," said the teacher, "I should give you two boys an apple and tell you to cut it in two, how much would you get, Tommy?"

"None," replied the youth, "lessen you helt Jim till I eat it up!"—Atlanta Constitution.

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## Patrons of Husbandry.

### The Grange Field.

As yet no definite arrangements have been made respecting the projected summer Grange meeting in the Santa Cruz mountains, but there is little doubt that the thing will be a go in one shape or another. The good people of Highland, with whom the project originated, are very earnest in the matter, but, being very young in the Grange work, feel a delicacy about taking the lead. It was this feeling which prompted them to offer the leadership to San Jose Grange, which still has it under consideration, upon the basis of a favorable committee report. In the meanwhile, time which should be spent in preparing the site for the reception of visitors is passing away and the Highland people are uncomfortable under it. They now propose, in order to give the scheme a recognized basis, to ask the State Executive Committee to father the project to such extent as will be involved in the adoption of the following resolutions:

*Resolved, First*—That this Executive Committee approves the proposal of Highland Grange to establish a permanent Farmers' Summer Encampment in its vicinity, with instruction in agriculture and economics by the faculties of the State and Stanford Universities, and recommend similar movements to the Granges of other localities.

*Second*—It is distinctly understood that these meetings, while properly and inevitably conducted by the Grange, as the organized representative of farmers, are designed for the benefit of the entire farming class, and in no sense as exclusive Grange meetings.

*Third*—In our opinion the educational features of the meeting should be under the control of the State Grange, the business and material arrangements being directed by the Grange nearest the place of meeting.

*Fourth*—In view of the fact that Highland Grange proposes to establish a camp at once, and has requested San Jose Grange to accept its leadership and control, we shall be pleased to see San Jose Grange accept and act upon that proposal; but should San Jose Grange not see its way clear to the responsibility, we request and authorize Highland Grange to assume and take charge of all business arrangements, provided, however, that no debt be incurred or the financial credit of Highland Grange or the Order be in any way pledged, and we request the Worthy Master of the State Grange to appoint, from members of the Order residing in the bay and coast counties, a suitable committee to arrange for the educational work.

*Fifth*—We request the Worthy Master of the State Grange to give to the enterprise his official support and assistance in all proper ways, it being understood that all present arrangements are temporary, and to be finally settled by the State Grange, after the experience of this season.

It is understood that the members of the Executive Committee will readily endorse this. Worthy Master Roache has already given it his assent, as also has Bro. Cyrus Jones. Bros. Loucks and Walton are yet to be heard from, but no doubt is entertained as to their view of it. Under this official endorsement, when it shall be secured, the Highlanders will go to work, freely devoting their time and that of their teams to making ready the camp ground. The area proposed to be prepared this season will, according to the estimate of Prof. Childs of the State Normal School (who, by the way, warmly approves the project), accommodate a camping population of about 1000 persons.

Speaking for the RURAL PRESS, we admire immensely the determination and grit of the "Baby Grange" to actually do a good thing. It is a display of energy coming very suggestively from the newest blood in the Order, and is significant of good times ahead for the Grange.

It is well worth the attention of subordinate Granges generally that through good times and hard times alike Yuba City Grange maintains its

active character and its connection with the practical affairs of Sutter county. It appears to have a leading part in everything going, and by its energy and efficiency makes itself thoroughly respected in its own community. It is characteristic of this Grange that it is preparing to entertain the State Horticultural Society, which meets at Yuba City on Friday the 31st inst. No matter how many come, so it is declared, there will be dinner enough and welcome enough to ground around. It is no wonder that a Grange which thus keeps itself at the front in local affairs continues to prosper.

When the next meeting of the Executive Committee is to be held is not announced, but it will probably be soon, since the inspection service has made a lot of business which will soon be pressing. We hear many inquiries as to how much the inspection work has cost; but it will not be possible to answer until the Committee have audited the accounts. At a rough guess we should say that the work cost in the neighborhood of seven or eight hundred dollars.

### Seasonable Observations.

TO THE EDITOR:—Even the careless observer must have seen with what unanimity the press of the State is heralding the natural advantages of every portion of our glorious State. Not the least gratifying in this direction is the course of the great dailies of San Francisco, which show such a willingness to do justice to all portions of the interior.

San Francisco has a great duty to perform in this matter, which she is accused of neglecting, said duty being to hold up and strengthen the agricultural interests of her dependencies. Her press would notice the country for a consideration, and at times it seemed as if willing to exchange a glorious permanency in her arteries of commerce for a curse-dealing temporary advantage.

How different the sentiment as expressed at the meeting of the Chamber of Commerce on the 16th, where the agricultural and commercial interests of the State joined hands in an attempt to further their respective interests. This is as it should be.

As a further evidence of a coming awakening of the interior may be cited the convention at Woodland, Yolo county, May 14th, of the editors and proprietors of journals published in the Sacramento valley. The unexcelled, and, I might say, unequalled natural advantages of this great valley, unheralded and unsung, was not enough to attract the attention of the moving world, as did the sands and songs of less favored regions; but now a union of effort has been inaugurated where harmony and good will shall prevail, and where every section will help every other section to secure the good of all. Perhaps the most important and popular resolution adopted unanimously was the following:

WHEREAS, The permanent interests of the Sacramento Valley lie in the preservation of its great river, without danger to navigation and without menace to farmers; therefore

*Resolved*, That the members of the Sacramento Valley Press Association dedicate their most earnest efforts generally and severally to obtaining all Government aid that can be secured for the preservation and improvement of said river, and shall battle continuously against any menace to that navigation, no matter from what source it comes.

And they further pledged themselves individually and collectively to do all in their power to advance the interests of the Sacramento valley, and secure the development of its vast and varied resources.

Now, this is the kind of talk that wins. Co-operation is the cornerstone on which is founded the Grange structure, and we hail with delight the

adoption of the principle by the talented editors of the great valley.

In my reference to Highland Grange encampment I possibly overdid my intentions, as I often do, judging from Bro. Adams' reply. All I wish to say now is that I would not only not throw a straw in the way of its success, but favor it with all my heart and influence, and would accept with grace and resignation my inability to partake of the pleasures that I know will be lavishly supplied.

Of course, all your readers smiled over the press dispatch from Indiana saying that a certain family had been blessed with triplets—all girls—and how the President, on being informed of the fact, and that they had been named after the lady members of his family, sent a \$500 check to the parents, etc. That act was followed by letters and telegrams from all over the country mentioning the birth of twins, triplets and fours, all asking for a check of any convenient size. Now here, I thought, was a chance for the Half-Million Club of San Francisco, and I was about to call their attention to the scheme when the President's private secretary, Mr. Thurbur, announced that there had been no triplets, no letter, and no check, and by a single stroke of his pen declared the scheme off just as the current seemed to set in the direction of the rural districts. So now we are once more thrown on our own resources.

It is a long time since I have seen anything as good on co-operation as the following from the Tulare Register: "The co-operation that we stand for is free as air, and as voluntary as man's will to do good or evil. Socialism depends upon the law for its power. Co-operation depends upon the good pleasure of those who are of common mind. Socialism tends toward dull routine and dead equality. Co-operation inspires enterprise and yields to every participant in proportion to his ability and worth."

I noticed, in a recent issue of the RURAL, that there had occurred in northern Rhode Island a heavy frost. What had happened in southern Rhode Island was not stated, but it is inferable there was no frost. I have seen it asserted that, owing to its narrow limits, no ordinance can be tested in the State for fear of inviting a declaration of war with a neighbor. What freaks of nature do appear at times.

Recent commercial news is to the effect that ships to arrive to take away our surplus wheat and barley are once more cornered by freight speculators. If this be so, and so long as the combine lasts prices of their product will be fixed by the ring and not by the demand. Such a scheme was practiced twenty-one years ago in San Francisco, and ended disastrously to all concerned. We shall probably be requested to state, "What are you going to do about it?"

The hay crop in these parts is immense, but it is at the expense of the grain acreage. Excessive wet prevented much plowing and seeding. The fields became covered with volunteer, which is large, and, as it is chiefly wild oats, is being cut for hay. The acreage to grain is not above two-thirds of an average, while conditions are from fair to good.

The fruit interests are large and rapidly extending, and, since the growers are not complaining, I assume the prospects are good for an average crop, as a whole, with possibly here and there a shortage in special lines. The peach crop, however, is a full one in all directions.

Everybody is on the alert for the State Horticultural meeting in Yuba City on the last day of May, at which time we hope to see the editor. The Grange will meet regularly the following day at 1:30 P. M., to which all members are invited.

GEORGE OHLEYER.  
Yuba City, May 20, 1895.

### A Summer Encampment.

TO THE EDITOR:—The admirable articles that have appeared in print from the pen of Bro. E. F. Adams of Highland Grange, Santa Cruz county, on the subject of a Summer Encampment, are so comprehensive and convincing that it seems almost superfluous to say more on the subject. But thoughts occur to the writer that might be well to consider in discussing and maturing one of the best plans yet proposed for a campaign for social, educational, health and recreative purposes.

At the head of these four purposes stands good health, and look the State over where you may, can you find a spot that exceeds the Santa Cruz mountains, so often called the Switzerland of California? For beauty of scenery, equitable climate, health-giving properties of the atmosphere, coming as it does from one of nature's great laboratories—the Pacific ocean—vitalized and revitalized by being wafted up the western slope of the mountains through the fir tree, the pine, the eypress and the cedar before reaching the proposed camp ground at Highland, they are unsurpassed.

It was the intention of your correspondent to have visited the proposed grounds when some twenty other members of San Jose Grange, by invitation, visited the place, but that scourge of humanity, that prince of beelzebub, neuralgia, took possession of our physical tenement, wholly incapacitating us for the trip, so I cannot speak of the topography of the proposed site. But having spent several weeks one summer near Highland, I write from a personal knowledge of the climate, and believe it to be one of the best in the State. And then, on the ground of economy, it cannot be equaled. That plucky little Highland Grange, the youngest of the Grange family, at its own expense proposes to clear off the brush that covers the mountainous land and make it easy of access (three cheers for Highland Grange!) and then only asks in return that San Jose Grange, being older and numerically stronger, enter it, take control and operate it in the interests of good morals, of education, and for the farmers and Grangers alike, that farmers who are not Grangers may be as free to come and made as welcome as though they were members of our Order.

That such an encampment through the summer months will aid in building up the Grange there cannot be a reasonable doubt, nor is there a question but that it will be largely attended. It is not expected that the same persons will remain at the camp grounds through the camping season of two or three months, but from the very diversity of crops grown in California hundreds could leave their farms in June or July that could not in August or September, and other hundreds could attend the camp grounds in August or September who could not in June or July, and herein lies one of its charms—this constant mingling and intermingling of farmers from different parts of the State.

Again, this will be an inexpensive camp ground. Any so desiring can bring their tents and provisions and live as cheaply as at home. Silks, satins, furbelows, plug hats, boiled shirts and blackened boots will in a large measure be discarded, and to wear our every-day clothes be strictly in order.

San Jose Grange at its last meeting unanimously passed a resolution in favor of a summer encampment, but some of the details will be considered at its next meeting, and now that Highland Grange has released San Jose Grange of all financial responsibilities, there seems to be no substantial reason why San Jose Grange should not comply with the wish of Highland Grange.

This encampment is designed for the farmers of the whole State, and if it is impossible for you of Siskiyou or San Diego to attend its meetings don't



scatter seeds of inharmony among those who can attend, but join us in sentiment and wish us godspeed.

AMOS ADAMS.

San Jose, May 20, 1895.

### San Jose Grange.

At the regular meeting of San Jose Grange on the 11th there was an extended discussion of ways and means to profitably dispose of the surplus fruit crop. A proposition was much favored that a company should be organized among members of the San Jose Grange for the purpose of canning, preserving and in other ways preparing fruit for the market. The matter was continued for one week without any definite action being taken.

The petition of the bankers of San Jose to have their license tax removed was discussed by a number of members of the Grange. The following resolutions were offered, action upon which was deferred till next Saturday:

WHEREAS, A statement appears in the papers that the bankers of San Jose have petitioned the supervisors to remove the tax or license recently imposed by ordinance from said banks and that the supervisors had taken the matter under advisement; therefore be it

Resolved, That San Jose Grange cannot see the justice of remitting taxes or removing licenses on banks and continuing them on the poor vegetable and fruit vender who is compelled to work sixteen hours a day to gain a subsistence for his family and oftentimes a scant one at that.

Resolved, That the San Jose Grange expresses the hope that the supervisors may see their way clearly to the equal and exact justice to rich and poor alike. But if discrimination must be made, justice would dictate that it should be in favor of humanity and not capital.

Resolved, That San Jose Grange cannot see the justice of a class of people enjoying full protection of our Government for their prosperity, their persons and their lives, without being willing to share their just proportion in sustaining said Government.

### Killing Frosts in the East.

Worse than Originally Reported—Grain as Well as Fruits Effected.

Later reports more than confirm the story of the disasters from frosts in the Eastern States, as related last week. A dispatch from New York (date of 16th inst.) thus summarizes the situation:

NEW YORK, May 16.—The damage done by the heavy frosts of last Sunday and Monday to the fruit crops on the Atlantic coast, and especially through southern and western New York and in New England, is incalculable.

Conservative estimates placed it for the two days at \$3,000,000, and reports of blight and ruin by the late and unexpected cold snap are still coming in from more remote districts. One of the best posted fruit men in New York told the *Chronicle* correspondent to-day that the misfortunes of the Eastern growers must prove a boon in a business way to Californians, as in some of the most productive grape sections of New York the best of the crop is almost entirely ruined.

This gentleman places the loss at fully \$5,000,000. At Jamestown, N. Y., immense damage was done by frost on Sunday night. All the fruit prospects are ruined. The grape belt suffered enormously. It is estimated that Chautauqua county's loss is fully \$2,000,000. A dispatch received to-night from Dunkirk, N. Y., says: Frost last night wrought more havoc in the Chautauqua belt. If the forecast from the Weather Bureau of frost to-night proves true, there will be no fruit of any kind remaining. Nearly everything in early fruit is already gone. Owing to the ruin of the grape crop sixteen basket factories in Chautauqua county have closed, thereby throwing large numbers of men out of employment. Merchants who have been carrying grape-growers along and taking as security the prospective crop of 1895 are in an uncomfortable predicament because of the crop failure. The calamity is so extensive that every kind of business will feel the loss severely.

At Erie, Pa., a killing frost fell at midnight, Sunday, and did extensive damage in the grape belt. In the vicinity of Brockton, Westfield and Ripley the damage is general and will probably take half a crop. About the northeast, Concord suffered greatly, and fully a quarter of the crop is killed. Niagara's very early grapes, well advanced, are almost a total loss.

Strawberry vines were not advanced far enough to get caught. The apple and peach crops are injured, but not to any great extent. The loss from freezing and frost is roughly estimated at \$750,000 in Erie county alone. This section has 4000 acres of grapes and Chautauqua county, N. Y., 6000. The loss in this county will be close to two-thirds in the lowlands and one-half in the upper section. This county suffered to a less extent than Chautauqua, because of the lower altitude. Other fruits are badly injured and the cereals greatly damaged.

There was a light frost in the valley of the central Hudson on Monday morning which damaged some of the fruit blossoms. In some sections back from the river there is said to have been ice one-quarter of an inch thick.

Some growers say that their strawberry crop will be partly ruined. Most of the fruit tree blossoms were just dropping to the ground, while the growing young fruit is just forming. Much damage is already reported from the fruit district of southern Ulster. The peaches are thought to have escaped, being too far advanced, and in some sections of Sullivan and Delaware counties fruit blossoms are badly frozen. Snow fell in most of the up towns of the New York, Ontario and Western Railroad.

At Lockport, in western New York, the thermometer registered as low as 28° Monday night. Fruit and vegetables suffered in Niagara county, and, although the extent of damage is not yet ascertained, it will reach thousands of dollars. Grape vines were stripped of their leaves. Fruit trees in blossom were damaged, and it is feared the crops will be small.

In central New Hampshire fruit buds were nipped, small trees were killed and crops of various kinds put in early, which the warm weather had brought up to a height of three or four inches, were cut down, making re-planting necessary.

The strawberry and peach crops suffered severely throughout Rhode Island and Connecticut.

But this is not the whole of it, for in the Western States grain fields suffered as much as orchards and vineyards. A Chicago dispatch (date 19th inst.) says:

CHICAGO, May 19.—Killing frosts are indicated in fifteen States of the West and Northwest to-night. Early this morning the first bulletins received indicated serious damage to crops, small grain and fruits. From South Dakota, where the rains of three weeks ago had hastened seeding, killing frosts were reported, and the same news came from Montana, where range cattle have been suffering for grass. A similar bulletin came from North Dakota, the wheat belt of Red river valley and from northern Wyoming, where there is nothing to freeze but sagebrush. From Duluth to St. Paul and throughout central Minnesota light frosts were huddled. The damage they inflicted was largely confined to small grains.

The morning bulletins of temperature at different Western points where crops might be affected by continued cold weather were not favorable to a marked rise for at least twenty-four hours. But little change was reported from the West and Northwest during the day, except that there was a tendency to a slightly higher temperature until sunset, then clearing skies and wind changing from northeast to north and then northwest. This was indicative of heavy frosts in the States affected between 12 m. and dawn.

At nightfall the indications portended very bad frosts throughout Illinois, western Wisconsin, Michigan and Indiana during the night. Danger bulletins foretelling frost destructive to crops were sent by the Weather Bureau to fifteen States, those most affected being Minnesota, Wyoming, Kansas, Missouri, Indiana, Illinois, Michigan, Wisconsin, Nebraska, Iowa, the Dakotas and Colorado. The end of the rains, the sharp turn in the wind to northward and clear skies at midnight all foretold to trained observers conditions of cold almost unprecedented at this season of the year in any portion of the West. For Nebraska a drop of at least five degrees is expected, and for Kansas of three to five degrees. Indiana and Michigan will experience about the same change as Illinois. There will probably be a scene of wild excitement in the grain market to-morrow.

St. Paul, May 19.—Dispatches to-night from Dickinson, Grand Forks, Jamestown, St. Johns and Noche, N. D., indicate the frost of last night was the severest in many years. In some places ice formed to the extent of more than an inch. Young wheat is frozen off to the ground in many localities. One report places the damages as high as 70%. There is a heavy frost in Minnesota to-night, which is very severe in the northwestern counties.

There is more Catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease, and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven Catarrh to be a constitutional disease and therefore requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from ten drops to a teaspoonful. It acts directly on the blood and mucous surfaces of the system. They offer one hundred dollars for any case it fails to cure. Send for circulars and testimonials. Address, F. J. CHENEY & CO., Toledo, O.

Sold by Druggists, 75c.

The most cautious man we ever knew was the one who was afraid to buy a lead pencil for fear the lead wouldn't reach right through it.—*Syracuse Post.*

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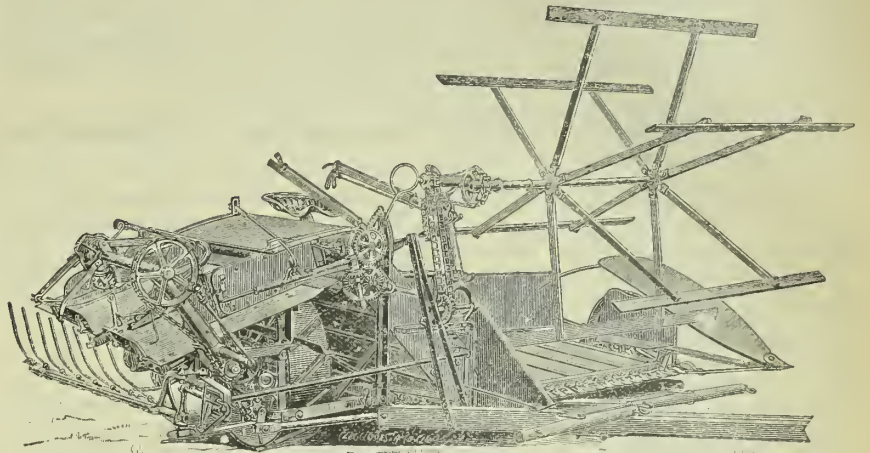


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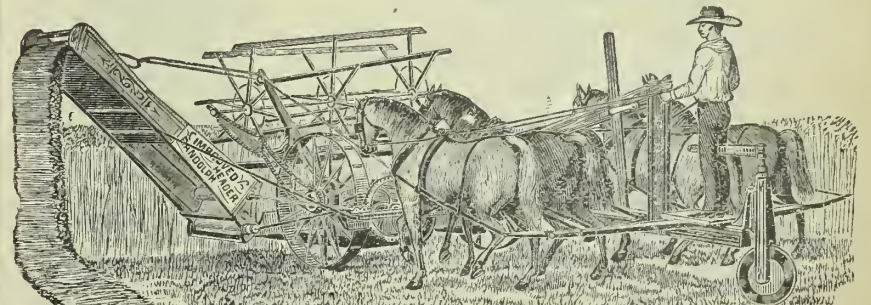
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## A Changing Map of Trade.

The *Age of Steel* says: "There is no fixedness in commercial supremacy. It has come and gone from one nation to another, and all the way down the page of history the bright and dark lines have had their changing alternations. They are changing now and the shifting lines are slowly shaping the destinies of nations, young and old. Rightly or wrongly, by fair means or foul, the older nations are pushing their conquests or colonies wherever the opportunity offers, to retain their grip on commerce, by securing new markets for their surplus products. Commercial necessity has replaced the old lust of empire, and is really the key to the avidity with which Europe is dividing Africa as hunters do their game, and is casting its eye over continents and oceans for commercial territory. In the western hemisphere the same impulse is making itself felt with more or less of the same reasons, and is at the bottom of much of the idle but significant talk of annexations, protectorates and other forms of grabbing real estate. Taking this, however, at what it is worth, and leaving the grave hazards it involves to take care of themselves, it is beyond a doubt or peradventure a sober and undeniable fact that the routes of commerce are shifting from the Atlantic to the Pacific. In that direction lies the future arena of the world's struggle for commercial supremacy. A glance at the growth of populations from the western slopes of the Rockies to the sunset rim of the sea lines, and from Alaska to the Mexican border, with what it signifies of enterprise and development, we see the massing of a commercial momentum that will dot the Pacific with its ships and overlap the fringes of Asia. The eddies of this movement will eventually spread beyond the Isthmus to the Horn, and history will run its iron pen over an opening chapter in the story of man. With Siberia intersected with Russian railways and its areas populated; with Japan a new and potent factor in the East and China waking out of its long slumber, to say nothing of the future of Australasia, with its persistent and aggressive race, it needs no prophet to forecast the coming change in the map of commerce. The place of the United States in this recasting of history is settled by its geography. Some years ago we outlined this route of destiny, and we see it more elaborately and broadly defined in a recent issue of the *North American Review*, in which the facts noted in this article are succinctly stated. From a national point of view this outlook is more than encouraging, and, we make bold to say, our destiny in this matter can be best reached not by jingo, but by the merchant and manufacturer accepting the situation and not neglecting its opportunities. There is no need to force the tide when it runs in our favor."

## Signaling Through Space.

In further confirmation of the successful experiments concluded last year in England in transmitting telegraphic messages over long distances without wires, an account has been received from Scotland of the maintenance of telegraphic communication by means of the same system between the island of Mull and the mainland. The islanders were decidedly put to a shift. The six-mile cable which usually kept them in touch with the other world had broken down, and they were uncertain as to how long the interruption to communication would last. A local electrician, who had heard of Mr. Preece's plan, saw no reason why it should not operate at Oban, just as well as anywhere else, and lost no time in running a gutta-percha insulated wire, one and one-half miles long, along the ground from Morvern, fifteen miles from Oban, and signaling through that, while on the island of Mull the ordinary overhead circuit connecting two distant villages was made use of. The distance intervening between the two parallel circuits was about three and one-half miles. A vibrator was used as a transmitter, and a telephone as a receiver,

and the usual telegraphic traffic was carried on until the cable was repaired. An account not so well authenticated comes from India of the completion by Professor J. C. Bose, of the Calcutta Presidency College, of some instruments by which extraordinary results are said to have been obtained. Certain phenomena have been reproduced without any connection between the transmitting and receiving stations. Signals in the form of light and sound have been passed along the ether, without any other apparent means of transmission, and even solid walls have not interposed any obstacle to the passage of these signals.

## Sweeping with Compressed Air.

One of the most notable of the present century's small inventions is an air pump for cleaning purposes. A hose pipe charged with air under fifty pounds pressure to the square inch is turned upon the article or room to be cleaned. It is used in precisely the same way as the water and the hose for washing purposes. It is far more effective in its result than brooms, beaters or brushes, as it searches out and penetrates every crevice and cleft in woodwork. This device is at present applied to cleaning cars, but so perfect is its work that it is only a question of time when it will come into use for other purposes. Hotels and large buildings might be swept out and dusted in an incredibly short space of time. Carefully managed, this air pressure would rid the room of every particle of dust, clean furniture, carpets and the heavier articles of bric-a-brac and ornaments. It would do the work of a dozen people. It is now in order for some home missionary to invent some simple device that will work an air pump and current for household use. Its introduction would revolutionize housekeeping and solve the heretofore hopeless problem of clean rooms, and will keep furniture, covers and carpets. It would be economical, as it would render less service necessary, and would save a large portion of the wear and tear of furnishing textiles. In houses where there is hydrant water it would not be at all difficult to attach an air-pumping apparatus to the kitchen or bathroom faucet and thus furnish power for every floor. Some years ago it was said that there would never be an invention that could sweep the dust, but at the present rate of things the problem is practically solved by this simple and easily used device.

THESE five years have indeed done wonders in the domain of street railroading in this country, and have even set our transatlantic friends to work following our example, says Joseph Weltzer in *Scribner's* for May. To give some idea of the extent to which electricity has displaced the horse, and, on the other hand, been instrumental in creating new roads, we need only cite the fact that at the present time there are over 850 electric railways in the United States, operating over 9000 miles of track and 23,000 cars, and representing a capital investment of over \$400,000,000. What stupendous figures when we consider that in 1887 the number of such roads amounted to only thirteen, with scarcely 100 cars.

**WHAT WE SAY WE DO WE DO DO**

The things we forget!

What untold mischief these do cause us all!

Perhaps you have a half-formed notion of buying a binder, reaper or mower—and it's not a McCormick.

You decide upon a machine which, you remember, showed up very favorably in a draft test—but you forget what sort of a "test" it was.

You remember the agent said his machine "is just as good as the McCormick."

You remember the McCormick is a little higher in price—

But you forget that the

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was on hand ready to meet any and all competition in the World's Fair field tests—tests in which all American machines were urged to take part.

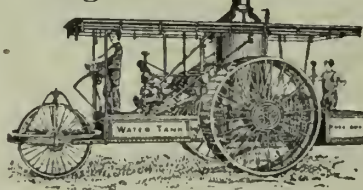
You forget that the machine you think of buying did not obtain its draft figures in these tests with the McCormick—in the same field and under the same conditions.

You forget that the McCormick is higher priced only because of its higher quality.

Write the McCormick Harvesting Machine Co., Chicago, or call on their local agent.

**WHAT WE SAY WE DO WE DO DO**

## Price's Traction Engine.



We have one of these engines that was used about one month last season and was taken back by us by reason of illness of purchaser. Engine is in perfect order, and in better working order than when first sent from the factory. A BARGAIN. Indicated power, 80-horse; Cylinders, 8x8; Wheels, 8 ft. high, 28 in. wide; weight, less than 10 tons. Price when new, \$4500.

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## Formation of Coal.

The formation of coal, according to Dr. Homer Green's cosmical theory, was due to the solar orb bringing forth, millions of years ago, when it was larger and hotter than to-day, a wonderfully luxuriant vegetation, including plants of strange kinds, mosses as large as forest trees, and ferns thirty feet in height, growing up richly from the clayey soil and forming dense jungles in the vast marshes, the latter covering great areas of the earth's surface; these ferns, mosses, and the leaves, branches and trunks of trees in time falling and decaying where they grew, only to render the soil more fertile and the next growth more luxuriant. Year after year, century after century, this process of growth and decay going on, until the beds of vegetable matter thus deposited became of great thickness; the earth's body, however, still continued to shrink, in consequence of which her crust at times contracted and fell in, the land then sinking throughout vast areas, the beds of vegetable matter going down and the water sweeping again over the great marshes, sand and mud and gravel were laid down anew over the deposits, and the clayey soil from which the next rich growth would spring was spread out on the surface, this process being repeated again and again, as often, indeed, as seams of coal in any coal bed. In this way, according to Dr. Greene, the conditions for the formation of coal were made complete, atmospheric air being entirely excluded, while the vegetable beds underwent the processes of decomposition, so that in some beds of coal whole trees have been found, with roots, branches, leaves and seeds complete, and all converted into the same kind of coal as that by which they were surrounded.

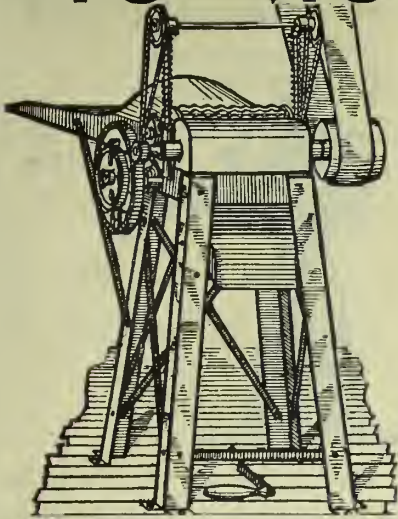
## Wood Pulp for Horseshoes.

A practical invention by a veterinary surgeon is now successfully applied at Berlin. He manufactures horseshoes of paper, impregnated with oil or turpentine, to make it waterproof. After being saturated, it is glued together in thin layers with a cement which does not become brittle when drying, and consists of a mixture of Venetian turpentine, powdered chalk, linseed oil and lacquer. These horseshoes are made in various thicknesses. The holes, admitting the nails by which the shoe is fastened to the hoof, are stamped through the paper when moist. It is then subjected to a very strong pressure under a hydraulic press, and, when dry, can be filed and planed to fit the hoof snugly. The inventor has also attempted to make these horseshoes of paper pulp, adding chalk, sand, turpentine and linseed oil in such quantities that the material is impermeable to moisture. This composition possesses the necessary elasticity and toughness for the purpose. It can be pressed in moulds and dried afterwards, or cut out of blocks of the mass and placed under strong pressure. The shoes made by pasting together paper sheets are preferable, as they are stronger than those made of the compressed material. These shoes can be fastened to the horse's hoof either by nails, as usual, or be cemented with glue consisting of gum of ammonia, one part, and gutta percha, two parts. The great advantage claimed by the inventor for the new shoe is the impossibility of the horse slipping on slippery roads.

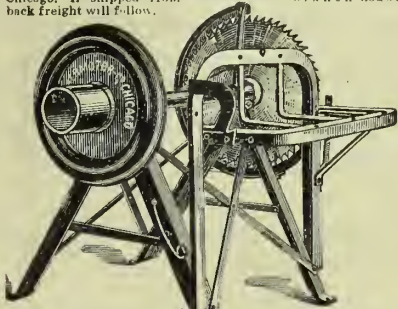
It is now believed, and with high probability of the truth of the theory, that the shooting stars which sometimes fall to the earth in a semi-molten condition are almost or wholly devoid of heat when they enter the atmosphere. They are set on fire by friction against the air due to the rapidity of their motion. It is possible that the force of the earth's attraction solidifies such meteors from a gaseous condition in which they may exist in space.

The sun has about 228,000 times the mass of the earth, and the moon only one-eightieth of this mass.

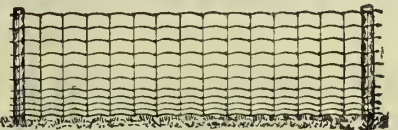
The Aermotor all Steel Feed Cutter Worth

**\$40 FOR \$10**

We will furnish this feed cutter, one only to one person not later than July 1, 1895, for \$10.00 cash, and addresses of ten neighbors and acquaintances of the sender known personally by him to be responsible and influential men in their localities who need and are likely to buy something in our line this year. After July 1, money sent in on this offer will be returned to sender and no attention will be paid to inquiries or letters concerning this offer. It is literally now or never. The feed cutter is delivered f. o. b. Chicago. If shipped from branch houses back freight will follow.



This all steel frame and saw which we put out at \$15.00 last year, but now sell only at \$25.00, is justly articles we ever made. **AERMOTOR CO. Chicago.**



**FIRST on the FARM,  
FIRST on the RAILROAD,  
FIRST around PARKS and CEMETERIES.**

Not our word for it, but that of our regular customers, first-class farmers, who pride themselves on having the best and whose motto is "what is worth doing at all is worth doing well," and first-class railroads, that seek protection for right of way, rather than "anything to comply with the law." The Park Commissioners, Cemetery Directors and owners of Game Parks who have tested it will vote for it first, last and all the time. **PAGE WOVEN WIRE FENCE CO., Adrian, Mich.**

**"INDURINE" COLD WATER PAINTS.**

A Most Remarkable Material is the **OUTSIDE INDURINE**. It stands rain and exposure as well as oil paint, and costs only a fraction as much. It is just the thing for fences, outbuildings, factories, etc., being cheap, durable and easily applied by anyone.

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**INSIDE INDURINE** is designed especially for factories, stables, and general inside work, as a substitute for white-wash, kalsomine or oil paint.

It will not rub or scale, soften or darken with age, and works well over old whitewash. A dry powder to be mixed with cold water.

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**MEYER, WILSON & CO., 210 Battery Street, San Francisco. Sole Agents for the Pacific Coast.**

## Jackson's "Light Weight" Horse Forks,

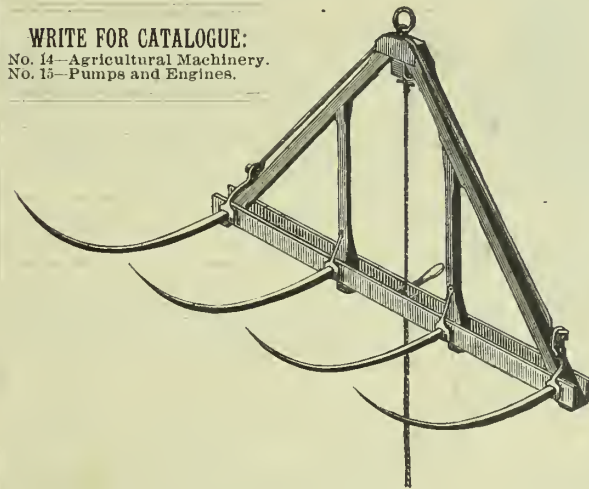
Made and sold under the following Letters Patent:

No. 210,458.....Dec. 3, 1878  
No. 306,667.....Oct. 14, 1884  
No. 403,019.....May 7, 1889  
Other patents pending.

The purpose of this notice is to inform both farmers and merchants, who use or sell Horse Forks, that they must not purchase Horse Forks that infringe the above Patents; and to call their attention to the fact that certain horse forks, manufactured by F. E. Myers & Bro., Ashland, O., and imported and sold by the Deere Implement Company, of San Francisco, are direct infringements of the above patents, the manufacturers of the infringing forks having admitted in Court that their forks were an infringement of the above patents, and are now paying royalty for manufacturing and selling; and they have agreed not to sell any west of the Rocky Mountains.

All parties selling or using these infringing Horse Forks will be promptly prosecuted.

**WRITE FOR CATALOGUE:**  
No. 14—Agricultural Machinery.  
No. 15—Pumps and Engines.



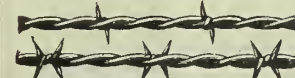
**PRICE REDUCED** { 3-foot, with 4 tines, each.....\$20 00  
3 1/2, 4 and 4 1/2-foot, 4 tines, each..... 25 00  
5 and 6-foot..... 30 00  
Extra Fork Tines, \$2.50 each.

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Weight per Rod,  
Not Price per Pound,  
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100 Rods of Waukegan  
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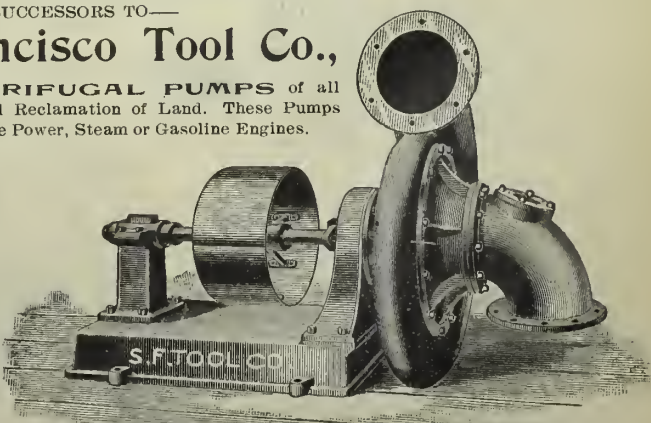
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Triple-Acting Pumps,  
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**LIGHTNING WELL MACHINERY Works.**  
LARGEST  
All kinds of tools. Fortune for the driller by using our Adamantine process; can take a core. Perfect Economical Artesian Pumping Rigs to work by Steam, Air, etc. Let us help you. **THE AMERICAN WELL WORKS,**  
Aurora, Ill.; Chicago, Ill.; Dallas, Tex.



## S. F. MARKET REPORT.

## Market Review.

SAN FRANCISCO, May 23, 1895.

**FLOUR**—We quote: Net cash prices for Family Extras, \$3 40@3 50 per bbl; Bakers' Extras, \$3 40@3 50; Superfine, \$2 35@2 50 per bbl.

**WHEAT**—No. 1 Shipping Wheat is quotable at 90c per cwt, with 11½¢ for choice. Milling Wheat keeps steady at 92½¢@93¢ per cwt.

**BARLEY**—Feed, fair to good, 62½¢@63½¢; choice, 65¢@66½¢; Brewing, nominal.

**OATS**—We quote: Milling, \$1 07½@1 17½; Surplus, \$1 10@1 20; fancy feed, \$1 02½@1 07½; good to choice, 95¢@96½; fair to good, 90¢@95¢; poor to fair, 87½¢@90¢; Black, nominal; Gray, 95¢@1 02½ per cwt.

**CORN**—We quote: Large Yellow, \$1 10@1 12½; small Yellow, \$1 12½@1 17½ per cwt; White, \$1 10@1 15.

**RYE**—Quotable at 87½¢@90¢ per cwt.

**BUCKWHEAT**—Quotable at 90¢@91 10 per cwt.

**OILCAKE MEAL**—Quotable at \$25 per ton from the mill.

**COTTONSEED OILCAKE**—Quotable at \$24 per ton.

**BRAN**—Quotable at \$14@15 per ton.

**GROUND BARLEY**—Quotable at \$14 50@15 50 per ton.

**HAY**—New Wild Oat selling at \$6 50@7 50 per ton. We quote as follows, o.d.: Wheat, \$7@11; Wheat and Oat, \$7@10 50; Oat, \$7 50@10; Alfalfa, \$7@8 50; Barley, \$7@8 50; Clover, \$7@8; Compressed, \$7@9 50; Stock, \$6@7 per ton.

**STRAW**—Quotable at 40¢@50¢ per bale.

**FEED**—Manhattan Horse Food (Red Ball Brand) in 100-lb. cabinets, \$8; Manhattan Egg Food, 100-lb. bags, \$11 50.

**BEANS**—We quote as follows: Bayos, \$1 30@1 60; Butter, \$2@2 25 for small and \$2 25@2 50 for large; Pink, \$1 35@1 60; Red, \$1 40@1 70; Lima, \$1@1 40; Pea, \$2 50@2 75; Small White, \$2 50@2 75; Large White, \$2 55@2 75; Blackeye, \$3@3 50; Red Kidney, \$2 50@3; Horse, \$1 60@1 70 per cwt.

**SEEDS**—We quote as follows: Mustard, Brown, \$1 25@1 75; Yellow, \$1 75@2; Trislee, \$1 90@2 00; Canary, 3¢@4¢; Hemp, 3¢@3½¢; Rape, 1¼¢@2¼¢; Timothy, 5¼¢@6½¢; Alfalfa, 7¼¢@7½¢ per lb; Flax, \$2@2 50 per cwt.

**POTATOES**—Quotable at 60¢@75¢ per cwt for new crop; old, 35¢@50¢; Oregon Burbanks, 40¢@75¢ per cwt.

**ONIONS**—Are stationary in price. Quotable at 40¢@50¢ per cwt.

**VARIOUS**—We quote: Summer Squash, \$1@1 25 per box; Cucumbers, \$1 50@2 per box; Asparagus, 25¢@75¢ per box for ordinary and 75¢@1 50 for better qualities; Rhubarb, 35¢@50¢ per box; Los Angeles Tomatoes, \$3 50 per box; String Beans, 2¢@3¢ per lb for Vacaville; Wax Beans, 3¢@3½¢ per lb; Green Peas, 50¢@75¢ per sack for ordinary and 1¼¢@3¢ per lb for garden; Green Peppers, 5¢ per lb; Turnips, 50¢ per cwt; Beets, 60¢@75¢ per sack; Carrots, 30¢@50¢; Cabbage, 40¢@50¢ per cwt; Garlic, new, 5¢@6¢ per lb; Cauliflower, 60¢@75¢ per dozen; Dried Peppers, 11¢@12¢ per lb; Dried Okra, 15¢ per lb.

**FRESH FRUIT**—Apples—Quotable at 75¢ per box for new, being green.

Apricots—Quotable at \$1@1 50 per box.

Berries—Gooseberries, 1¼¢@2¢ per lb; Strawberries, Sharpless, \$2 25@3 50 per chest; Longworth, \$1@1 60; Raspberries, \$1 25@1 50 per drawer and \$1 50 per crate for Newcastle.

Cherries—Quotable at 35¢@50¢ per box for red and black, and 25¢@35¢ for white.

Currants—Quotable at 50¢@65¢ per drawer.

**CITRUS FRUIT**—We quote: California Navel, \$1 25@2 75; Seedlings, 60¢@81¢; Mexican Limes, \$1@1 50 per box; Lemons, Steily, \$3 75@4; California Lemons, \$1@1 75 for common and \$2 25@2 75 for good to choice.

**DRIED FRUIT**—Following are the prices furnished by the San Francisco Fruit Exchange. The figures presented represent carload lots, smaller parcels occasionally selling at slightly lower rates:

Apricots—Fancy Moorpark, 7¢; choice, do. 7¢; fancy, 7¢; choice, do. standard, 5½¢; prime, 5¢.

Apples—Evaporated 1¼¢@1½¢; sun-dried, 4¢@4½¢.

Peaches—Fancy, 7¢; choice, 5½¢; standard, 5¢; prime, 4½¢; peeled, in boxes, 12¢@13¢.

Pears—Fancy, halves, 5¢; quarters, 4¢; choice, 4¢; standard, 3½¢; prime, 3¢.

Dried Grapes—1½¢ per lb.

Plums—Pitted, 3¢@4¢ unpitted, 1¢@2¢.

Prunes—Four sizes, 4¢.

Nectarines—Fancy, 6¢; choice, 5½¢; standard, 5¢; prime, 4¢.

Figs—White, choice, 3¢@5¢; black, choice, 3½¢@3¢.

Raisins—In sacks (50-lb. boxes selling at ¼¢ per lb. higher): 4-crown, loose, 3¼¢; 3-crown, 2½¢; 2-crown, 2¢; seedless Sultanias, 3¢; seedless Muscatis, 2¢ per lb; 3-crown London Layers, \$1 40 per box in 20-lb. boxes; clusters, \$2; Dehesa clusters, \$2 50; Imperial clusters, \$3; 4-crown, loose, \$1; 4-crown, loose, faced, \$1 15 per box.

**NUTS**—Chestnuts, 3¢@5¢; Walnuts, 6¢@7¢ for hard shell, 7¢@9½¢ for soft shell and 7¢@9½¢ for paper shell; California Almonds, 5¢@6¢ for soft shell, 2¢@2½¢ for hard shell and — for paper shell; Pecans, 8¢@9¢; Peanuts, 6¢ for rough and so for polished; Brazil Nuts, 7¢@7½¢ per lb; Cocoanuts, \$4 50@5 50 per 100.

**HONEY**—We quote: Comb, 9¢@10¢; water-white, extracted, 6¢@6½¢; light amber, extracted, 5½¢@6¢; dark amber, 4¢@5¢ per lb.

**BEEWAX**—Quotable at 20¢@28¢ per lb.

**BUTTER**—Creamery—Fancy, 12¢@13¢; seconds, 10½¢@11½¢ per lb.

Dairy—Fancy, 10¢@11¢; fair to choice, 8¢@9¢; store lots, 6¢@7½¢.

**CHEESE**—We quote: Choice to fancy, 5½¢@7¢; fair to good, 4¢@5¢; Eastern, ordinary to fine, 10¢@14¢ per lb.

**EGGS**—Quotable at 11½¢@12½¢ per dozen for store and 13¢@15 for ranch.

**POULTRY**—We quote as follows: Live Turkeys—Gobblers, 11¢@12¢; Hens, 11¢@12¢ per lb; Roosters, \$5@5 50 for old, and \$3@10 for young; Broilers, \$2 50@3 50 for small and \$1 50@2 50 for large; Fryers, \$3@4; Hens, \$1 50@2 50; Ducks, \$3 50@4 for old and \$1 50@2 50 for young; Geese, \$1 25@1 50 per pair; Goslings, \$1 25@1 75; Pigeons, \$1 75@2 per dozen for old and \$1 50@2 for young.

**WOOL**—We quote spring: Year's fleece, San Joaquin, per lb. . . . 5¢@7¢ to 8 months do . . . 6¢@8¢ to 8 months Calaveras and foothill, free. . . 8¢@10¢ Do, defective . . . 4¢@6¢ Northern, good to choice . . . 8¢@11¢ Do, defective . . . 6¢@8½¢

We quote Nevada Spring: Light and choice . . . 8¢@9¢ Heavy . . . 6¢@7¢

**HOPS**—Quotable at 4¢@6¢ per lb.

## Breeder's Directory.

Six lines or less in this directory at 50c per line per month.

## Horses and Cattle.

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**J. R. CAFFEY**, Pleasant Grove, Cal. breeds only S. C. Brown Leghorns. Eggs for hatching, 50c per setting or 11 settings for \$5. Satisfaction guaranteed.

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**F. H. BURKE**, 626 Market St., S. F.—BERKSHIRES.

**CHAS. A. STOWE**, Stockton, Berkshire and Poland-China Hogs.

**M. MILLER**, Elsie, Cal. Registered Berkshires.

**J. P. ASHLEY**, Linden, San Joaquin Co., Cal. Breeds Poland-China, Essex and Yorkshire Swine.

**TYLER BEACH**, San Jose, Cal. Breeder of Thoroughbred Berkshires and Essex Hogs.

## Sheep and Goats.

**J. B. HOVE**, Bird's Landing, Cal. Importer and Breeder of Shropshire Sheep; also breeds Cross-bred Merino and Shropshire Sheep. Rams for sale. Prices to suit the times. Correspondence solicited.

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Take one postal card, write on its back, "How can I make larger profits on the egg crop?" Direct it to H. K. STARKWEATHER, 310 California St., San Francisco. Drop in postoffice and await prompt answer.

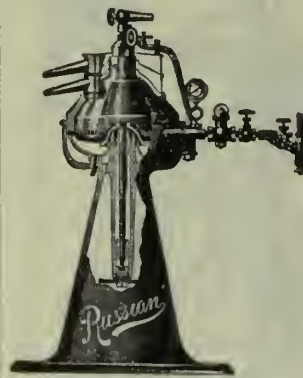


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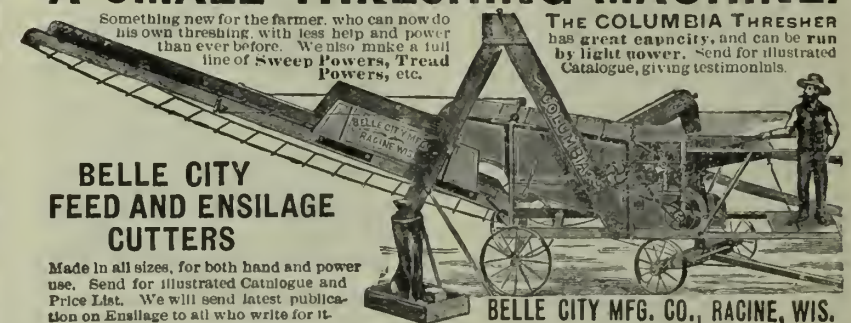
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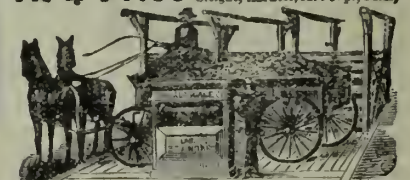
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Brain Surgery for Idiots.

An operation has been performed in New York by means of an electrical saw, which seems to indicate a distinct advance in brain surgery. It is well known that idiocy is often caused by the premature closing of certain soft bones in the heads of children, whereby the growth of the brain is obstructed. The usual treatment is to take a piece of the skull bone from the top of the head, and thus afford the cramped brain an opportunity to expand. Heretofore, the bone has been cut out with a punch somewhat resembling a conductor's punch, but this method was so jarring to the brain that the resultant shock nearly always killed the patient. The new method, which has been successfully practiced by Dr. S. B. Powell, in nineteen cases out of twenty, is to make the usual four trephine openings into the skull, and to insert a broad strip of silver-gently into one of the openings and work it along between the brain and the skull until it protrudes from the next hole, thus forming a shield between the brain and the skull, which obviates all danger of accident from the slipping of the instrument by which the portion of the skull is to be excised. A minute circular saw, operated by electricity, is then brought into use. A cut is then made from one trephined hole to the other, and a second cut is made about one-eighth of an inch from the first. The intervening bone is removed, and the brain is exposed. Two more cuts are made between the other trephined holes, the bone removed, the silver strips withdrawn, the flap of scalp drawn back and stitched, and the requisite bandages applied. Ordinarily, the operation lasts about twenty-five minutes. The great success which has attended these operations is attributed by Dr. Powell almost entirely to the great delicacy of treatment rendered possible by the electric saw. He thinks the operation has come to stay. It is not claimed that it will change idiots into persons of much mental capacity, but beyond question they can be improved so much in mind and brain that they will not be burdens to their friends and relatives, as idiots but too often are. The electric saw used weighs less than an ounce, and it can be operated as delicately as a scalpel.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

- FOR WEEK ENDING MAY 7, 1895.
- 538,889.—COMPASS DEVIATIONS—J. A. Arvidson, S. F.
  - 538,721.—CAR FENDER—H. A. Benson, Oakland, Cal.
  - 538,727.—LAWN SPRINKLER—J. Byler, Los Angeles, Cal.
  - 538,806.—GRAVITY VALVE—Cavalario & Sturm, San Jose, Cal.
  - 538,819.—CURRENT MOTOR—J. W. Cover, Everett, Wash.
  - 538,900.—DOOR OPENER—L. Dunn, S. F.
  - 538,831.—SAFETY VALVE—T. W. Hutzelman, Sacramento, Cal.
  - 538,843.—ROAD CART—G. J. Overshiner, San Diego, Cal.
  - 538,884.—ORE CRUSHER—A. H. Schierholz, S. F.
  - 538,885.—STEAM BOILER—E. Hydecker, S. F.
  - 538,738.—PREVENTING ELECTRICITY OF STREET PIPES—J. W. Guthrie, Sacramento, Cal.
  - 538,901.—PLOW—C. B. Williams, S. F.
- NOTE.—Copies of U. S. and Foreign patents furnished by mail or telegraphic order. American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

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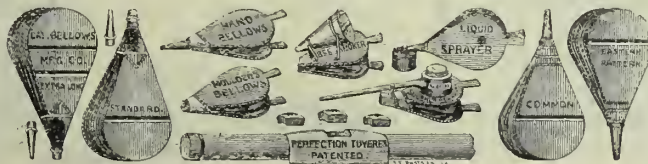
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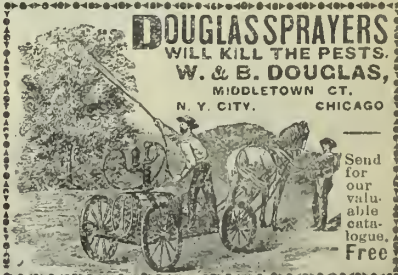
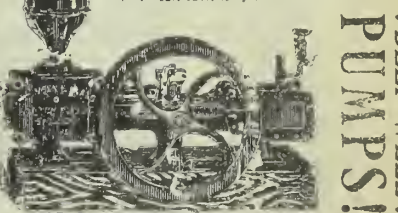
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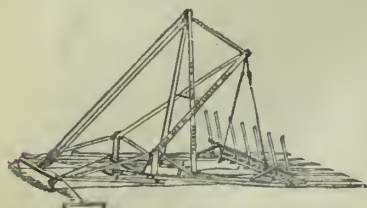
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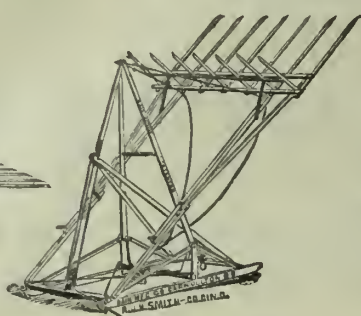
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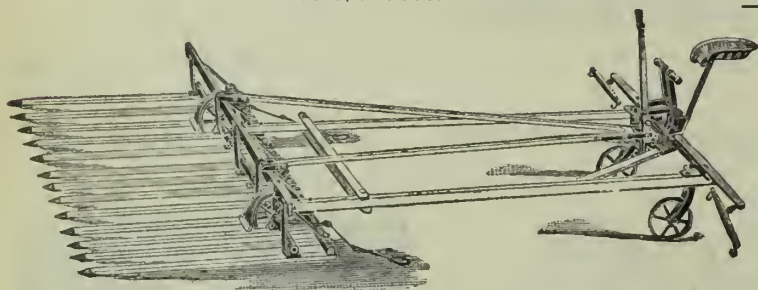
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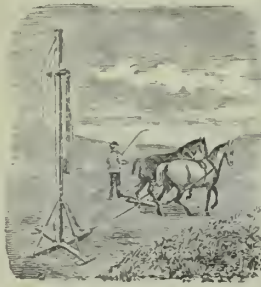
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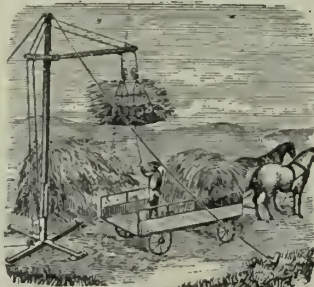
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### IMPORTANT FEATURES.

The entire wagon load is hoisted up in a center-opening net, by a self-braced Portable Derrick, which is moved from stack to stack ground without being taken down. Half an hour is ample time to move and set. Two nets can be used in each box, and the load taken out in two parts by having a partition in the box. Any farmer can at once see many advantages gained by the use of this invention.

Stacks can be built of great height, up to 30 feet, and only the wagon driver is needed to perform the operation of unloading.

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One large and two small nets used for each wagon. Parties having boxes longer than 16 feet should order two nets for each box.

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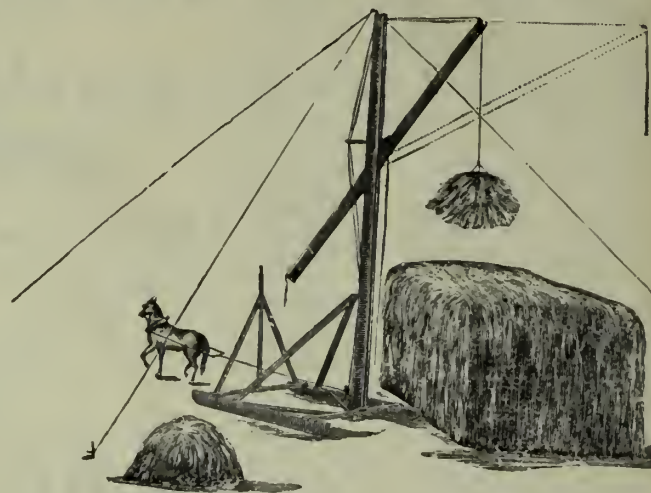
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## THE OLIVER DERRICK.

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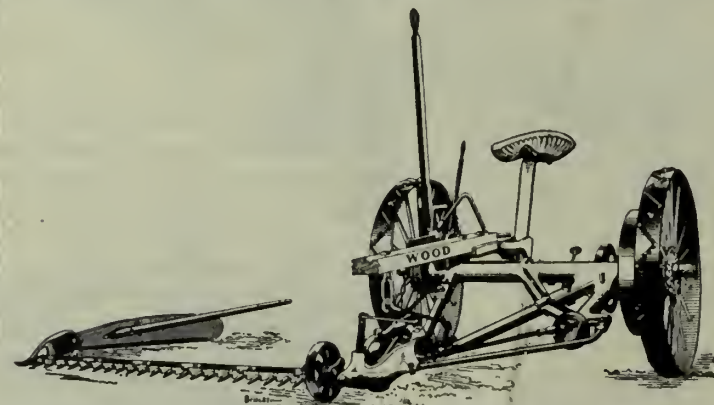
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Second—It is the only Derrick that can be easily and quickly folded for transportation. Horse used for hoisting hay can elevate mast and man can lower same.

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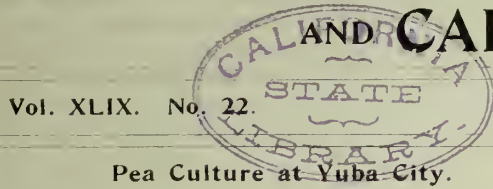
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# THE PACIFIC RURAL PRESS



## CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 22.

SAN FRANCISCO, SATURDAY, JUNE 1, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

### Pea Culture at Yuba City.

It is no disparagement to local enterprise in other parts of the State to describe the region adjacent to Marysville and Yuba City as one which has displayed exceptional progress and development during the last few years. It is an old settled part of the State, it is true. Marysville figured prominently not only in early mining successes, but the region was also the scene of the first great fruit victory of the horticultural pioneers led by G. G. Briggs. Here, too, the first great effort for ornamental horticulture and home embellishment was made by that forerunner of pioneers, Gen. John A. Sutter. But though these were old achievements and though two decades of profitable wheat growing brought wealth

and splendid homesteads unsurpassed in any part of the State, to the Sutter county land owners, even here the recent achievements of the new era of California development have produced results as striking and gratifying as can be seen anywhere in the State. Our columns have contained from time to time many allusions to the fine orchard areas which have dispossessed vast fields of wheat; to the canneries and fruit shipping houses which have raised a hum of activity to disturb the rest of the old grain warehouses which were formerly about the only structures which clustered at points of shipments by

rail and river; and to the tasteful residences which have multiplied over the plain until the grand old Buttes look down now upon a broad garden of embowered homes instead of an expanse of winter blade and summer stubble. Wonderful indeed has been the transformation upon the rich plains, and significant is the change of the rich adaptations of the soil and of the insight and industry of those who have achieved it.

Into such a region the State Horticultural Society goes this week on a pilgrimage to receive the welcome of the progressive people, of whose work we have spoken. There will be much to see, much to learn, much to enjoy, and we trust many will profit by the opportunity. To show the continuation of the *RURAL*'s interest in the region, and as pertinent to the occasion, we adorn this page with a new manifestation of local enterprise which is of great interest and may prove of much profit. It is the growth of the finest peas for canning, and for the interesting information about the enterprise we are indebted to Mr. N. B. Kirtley of the *Sutter Independent*.

R. W. Skinner, superintendent of the Marysville cannery, is a man who believes in developing all the

resources of the country. As superintendent of the fruit cannery he saw that for a great part of the year the costly plant was idle, and the men, women and children upon whom he depended for labor during the fruit-packing season were forced to seek other employment or remain idle too much of the time. In trying to find a remedy he thought of canning peas, and determined to make a trial of growing and packing them. So he went over to Sutter county, secured the land and went to work.

With a drill he planted 111 acres, between the rows of young orchard not yet old enough to shade the ground. The same cultivation answered for the peas and the trees. Five varieties of peas were planted, viz., the American Wonder, Marrowfat, Champion of England, French Canner and Adriance.



GROWING PEAS FOR CANNING IN A SUTTER COUNTY ORCHARD.

The plants came up nicely and grew rapidly. During the last two weeks the pea field, which adjoins the town of Yuba City, has been the scene of busy industry. Picking has been in progress, and 250 men, women and children have found employment. The price paid for picking is half a cent a pound in the pod. The peas are picked in ordinary fruit boxes, emptied into sacks and hauled immediately to the cannery, where thirty persons are engaged in hulling and packing them. The hulling is done by machinery specially purchased for the purpose. A new capper is used in canning, which is guaranteed to cap 25,000 cans a day. Nearly 6000 cans of peas were packed, capped and cooked in a single forenoon. The crop is turning out better than was expected. When he began picking, Mr. Skinner thought he would have 4500 cases, but at the end of the first week he increased the estimate to 6500 cases. This is only an experiment with Mr. Skinner. He knows he can raise the peas and can them, but the question of profits is yet in the future. He is dealing liberally with the employees, on the theory that if he just comes out even this year he will have established his brand and learned the possibilities of the business.

It is to be hoped he will make it a big success, as there is plenty of land well adapted to pea culture in the section and plenty of labor to handle the product.

The engraving on this page shows the pickers at work in a young peach orchard. We expect to have, later, further information as to the yield and desirability of the crop from the point of view of tree growth, etc. The experiment is an interesting one.

### Filled Cheese with Butter.

As soon as our recently enacted dairy law was published, the question arose as to whether cheese made from skimmed milk to which rectified butter was added, to take the place of the cream removed,

was really an "imitation" or "filled" cheese. Such practice has prevailed to some extent, the profit lying in marketing a fine creamery butter and restoring to the milk in its place a rectified grease butter which could be bought at a much lower price. It seems that the new Dairy Bureau has submitted the question to Attorney-General Fitzgerald for his decision. The latter holds that "the law which requires cheese to be made out of pure milk or cream is not violated by the addition of not to exceed three per cent of butter made from cream." The law further requires that all cheese made in

part or in whole from any other substance than milk or cream shall be stamped "substitute for cheese." On this point the Attorney-General holds that cheese made from milk and butter does not require to be so stamped. Both of these decisions will be read with a great degree of interest by dairymen and cheesemakers, as they have been afraid to use butter in the making of cheese for fear of an infraction of the law. The Attorney-General will forward his opinion to the chairman of the State Dairy Bureau at once, and it is held that it will set all doubts at rest on this point. It will, of course, enable those who desire to produce a filled or enriched cheese to go on with their practice, but it does not protect the man who proposes to make a straight full-cream cheese. The danger in allowing the use of grease butter for filling is great. It will not be long before all the oils used in filling cheese will go as "butter," and so far as cheese is concerned it will make the law a warrant for adulteration.

THE Paris exhibition of 1900 is to cost four millions sterling, and will cover an area of nearly two thousand acres.



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Our latest forms go to press Wednesday evening.

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ALFRED HOLMAN, Editor.  
E. J. WICKSON, Special Contributor.

San Francisco, June 1, 1895.

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## The Week.

### Weather and Crops.

Again we have had a dash of weather and in it another contribution to the motley lot of climate which has marked the spring of 1895. This last group of showers have done some harm to the earliest fruits and to the hay, but usually the surplus water has been carried away by the following breezes and injury has thus been reduced to a minimum. We have also had May frosts in California, but they have been almost exclusively confined to our mountain valleys and plateaux, which have an Eastern weakness in that line not shared by the greater area of California. But while we have had high altitude frosts and low altitude showers the country eastward of the Sierra Nevada has had snow and freezing. Even our neighbor Nevada has had a snow mantle in her western valleys. At the East the recurring frosts and snows are still doing much harm to vegetation and it looks as if the Eastern spring would have to be dated very near the first of June this year.

### Dried Apples.

Frank Dalton, president of the San Francisco Fruit Exchange, an organization of dealers largely, has issued a circular claiming that harm is being done by dipping dried apples in hot water before packing. He holds that Eastern dried apples are packed dry and are selling in the territories better than ours because we pack wet. Much of our pack of dried apples is sold in the humid region of the Southern States, principally in the State of Texas, and it is held that the fruit for this trade should be packed dry. Mr. Dalton announces that the members of the Fruit Exchange have agreed not to buy this summer any dried apples which have been packed with water.

### More Labor.

Arrivals of Japanese are continuing and apparently several thousands will find employment in this year's fruit handling. Orchardists do not look upon them as trustworthy and long-headed as the Chinese, but this is perhaps due to their lack of training. They can be had cheaper than Chinese and there is something of an Asiatic war on a small scale springing up. At the same time the employment of Caucasians, old and young, in our fruit enterprises is increasing and their superiority clearly demonstrated. It is not likely that we shall ever rely upon Asiatic labor again in the future as we have in the past but possibly the present supply may serve temporary uses to advantage.

### Borax for Fruit Packing.

Frank M. Smith, the chief borax producer of this coast, is experimenting with powdered borax as a packing material for fresh fruit to be sent long distances. He reports success with a barrel of cherries which was packed in borax and shipped to Chicago, where they were disposed of at high prices,

owing to their good condition. Mr. Smith claims that the same borax can be used over and over again. Private families, as well as hotels and restaurants, can have their borax bins at small expense, in which they can constantly keep an assortment of fresh fruit. We have no doubt the fruit will keep in this way, so they will in powdered gypsum, but probably longer in borax. But when taken for use the fruit must be washed to get rid of the borax, and this is the trouble with all powders proposed for isolation and absorption.

### Poultry Association.

We recently had a full descriptive letter from the secretary of the new poultry association. It is now announced that the Pacific Poultry and Pigeon Association has been incorporated with \$10,000 capital stock, of which \$2250 is subscribed. The directors are G. W. Cumbers and George F. Emery of Oakland; T. W. Leydecker, Frank Leed, S. A. Wells, Elias Rund, Charles A. Wright, John F. Mecklem, William P. Archibald, Jr., and W. G. Benton of Alameda and Frank Brush of Santa Rosa. We do not know just what the relations of this society are to older ones. Perhaps some reader will tell us the whys and wherefores of it.

### Fruit Shipping.

Any one who takes a trip along the railway lines through the fruit regions needs no one to point out signs of activity: they are on every hand. Shipping houses are being enlarged and improved. Fruit cars are marshalled in long lines at all convenient points and every item of readiness for quick work is looked after. The 700 ventilated cars ordered some time ago by the Southern Pacific, in anticipation of increased shipments in this line, are nearly ready for use. In fact some of the cars are coming west now. The rush of business in handling California fruit will not begin before the middle of June. For six weeks after that date the powerful engines on the mountain division will be tested to their full capacity in hauling the fruit over the hills on fast time. A few carloads of cherries have gone forward from Sacramento in refrigerator cars attached to passenger trains. The cost of this rapid transportation is \$2.25 per 100 pounds, exclusive of charges for refrigerator. The Atchison, Topeka and Santa Fe is doing a fair business in fruit shipments. H. C. Bush, general freight agent of the company in San Francisco, figures that the traffic will be good when the peaches come. The Atlantic and Pacific can take fruit through from Los Angeles to Chicago in six days. It looks as though the traffic would be large from all points and, as remarked elsewhere, profitable.

### Army Worms.

The visitation of army worms in the interior has been quite serious in some localities, and we hope has nearly spent itself. The State Board of Horticulture has had its eye on the invader and has done all it can to help in the suppression. The report is that the pest has invaded Madera, Pomona, Chino, San Bernardino, Merced and Porterville, and is marching farther south. These worms clean out every particle of vegetation in their path, and their destructiveness is practically without limit. In Porterville and vicinity they have been attacking the vines and orange orchards. In Woodland two wagon-loads of thirty children were taken to a vineyard infested with the pest. The children were provided with scissors and opened up a war of extermination against the worm. In Pasadena the worm has devastated lawns and gardens. Some farmers have been digging trenches, into which the worms are driven and then buried. The army worm has not been seen here for several years, and it is to be hoped that effective schemes will be used to meet this affliction.

### Wheat Values.

Our wheat growers are getting much comfort out of the signs of higher values for the coming crop. In Chicago on Tuesday wheat had a wild bull opening, and within five minutes from the time of the bell it was selling 2c higher than the price at which it closed Monday. Inside of another five minutes it had lost 1½ of the gain. The news was all of a bullish character. Monday's low barometer in the Northwest had resulted only in a light shower here and there, and the cold wave was being followed by what promised to be a scorching hot one. Perhaps the most bullish piece of news, however, was the report of King & Co. of Toledo. They summarized the advices from over 4000 correspondents in the wheat belt by saying that the indications were that in six principal wheat producing States not more than half an average crop can be raised, involving a reduction of 100,000,000 bushels in the crop aggregate for the year. There is, of course, a lot of gamble in all this; and yet the fact that there will be a marked decline in the output of great wheat regions at home and abroad, and that the world's stores of wheat have been reduced, is a somewhat stable foundation for a better range of values during the coming year. All this helps greatly to make people feel good and talk of the end of the depression.

## From an Independent Standpoint.

Walter Q. Gresham, Secretary of State, who died at Washington on Tuesday of this week, has been a very considerable figure in the public life of the country. In 1862—at the age of 29—he abandoned his private interests to enter the army, where he did valiant service, rising from the rank of Captain to that of Brigadier-General, with the honorary rank of Major-General bestowed for meritorious conduct. He took part in the movements which culminated in the capture of Vicksburg, and later commanded a brigade of McPherson's corps in the hot campaign preceding the fall of Atlanta. Before Atlanta he sustained a wound which stretched him upon a bed of agony for a year and left him physically shattered for life. This ended his military career, for before he was able to stand the war was over. Mr. Gresham's civil career began before the war, in the Indiana Legislature, and was renewed immediately thereafter as one of the Republican leaders of his State. In 1868 President Grant invited him to enter the public service, offering him a choice of desirable places, but all were declined. However, in 1869 Mr. Gresham accepted the United States judgeship for the District of Indiana, resigning this place in 1883 to enter the Arthur cabinet, in which he served as Postmaster-General and for a brief time as Secretary of the Treasury, until 1884, when he resigned to accept an appointment as United States Circuit Judge for the Chicago District. This position he held until he became Secretary of State under Cleveland in 1893. His selection for this office was a notable surprise to the country, for, while he had personally supported Cleveland as against Harrison, he had not formally severed his relations with the Republican party, and was reckoned a Republican up to the hour of his appointment.

Whatever may be the rights or wrongs of the party system, it is still the accepted method of our political life, and whoever chooses to stand above it must face the storm of offended party spirit. As we view it, Mr. Gresham's course in 1892 and his subsequent acceptance of office under Cleveland was inspired by a high-minded, patriotic sense of duty. It is not for us to say whether he was right or wrong; but that he believed the time had come for independent political action there appears to be no doubt. As an act of political policy, it was an unquestioned mistake, for he had to meet a torrent of partisan wrath and suffer the political hatred of many who had long been associated closely with him in political affairs. On the other hand, his appointment was an offense to the Democratic leaders, who did not relish the elevation to the principal position in a Democratic Cabinet of an old political adversary. Added to these embarrassments were the normal problems of the office and the fact that they were of a character foreign to his experience and genius. Mr. Gresham was wholly unacquainted with diplomacy; he was subject to the authority of a willful superior, and he had to deal with an extraordinary series of grave international matters. All this is very recent history; and all the world knows of his mistakes. They have been committed in connection with Hawaii, in the negotiations which preceded the Oriental War, in the recent matter of British occupation of Nicaragua, etc., etc. For his course in these matters, Mr. Gresham suffered—and very justly, too—distinct loss of standing as a practical statesman.

As an administrative officer Mr. Gresham conspicuously failed, and it was well for the country and well for his own fame that he did not reach the goal—the Presidency—to which the hopes of multitudes of Americans at one time consigned him. It was in another sphere that his best service was rendered, and for that his name is destined to imperishable honor. In 1886 there came before his court at Chicago the celebrated "Wabash case," in which Jay Gould and others of his breed sought to legally maintain their peculiar system of corporate plunder. There was literally millions in it; the lower courts had been successfully managed, and the final success of an infamous job rested upon the combined effort of wealth and political influence to overwhelm Judge Gresham. How complete was the failure, is familiar history. The court stood a verit-



able rock of destruction for the jobbers' hopes. The Judge ignored the whole mass of fiction and sophistry by which the frauds were supported; swept aside all manner of technical stumbling blocks to denounce the scheme in naked terms; and restored the property in dispute to honest management. Such a public service at such a time is not to be overborne by subsequent political mistakes or by errors in an office for which he had no training or fitness. As time goes on a little, the latter will be forgotten and the people will honor with gratitude and reverence the memory of the man of high courage who stayed the hand of Jay Gould and who set the mark beyond which he and others of his wolfish kind might not pass.

The early personal history of Mr. Gresham lay along a path familiar to many who have trodden the heights of distinction in American life. Born in the country of Revolutionary stock; a hard-worked farm boy, the main support of a poor widow; a youth fighting against odds for education and for place in the world; an early assumption of the responsibilities of a family; a man pure in heart worshipping the God of his fathers; a patriot, freely putting aside his personal interests to support the honor of his country and his race—these are stages in Mr. Gresham's career which bring to mind a host of other names which national reverence loves to recall. While American conditions produce such men, and while they find acceptance and following in American loyalty and judgment, there needs be no prophet to tell that the national heart is sound.

The costly and vulgar splendors of the recent Gould wedding at New York are, so it is said, to be "eclipsed" by the ceremonies soon to mark the wedding of one of the daughters of the house of Vanderbilt. The event is to occur at Lennox, Mass., and it is promised that something like five hundred millions of American wealth will be "represented." The young woman's dresses for her bridal year have been made in Paris at a cost of \$40,000. Already half a million dollars worth of jewels have been presented to her. A steam yacht, a city home and an assorted lot of country houses, all splendidly equipped, are among the gifts; and just for a starter the young people are to have an allowance of \$15,000 per month. With this they are expected to rub along for the present, but later on, so the public is assured, a provision "more suitable" to their "position in life" is to be provided by their parents. There are further details, but readers of the RURAL, we fancy, will not care to hear them. It would seem that, aside from all considerations of taste, the promptings of business judgment ought to stop these foolish spectacles. The Vanderbilts as men of business, it would seem, ought to know that the American people resent these travesties of royal weddings as a violation of the American idea. They ought to know that one such vain and silly display of superfluous wealth does more to promote the spirit of socialism than can be undone in a lifetime. Spectacles of this sort set people to asking questions which the Vanderbilts and the Astors and the Goulds would rather not have asked. It is not a time for wealth to vaunt itself, to parade in arrogant and pretentious magnificence; it is rather a time for it to justify itself by public usefulness.

### Citrus Conundrums.

TO THE EDITOR:—Please answer the following questions:

1. Which is the best way of manuring citrus trees? Spreading the manure on the surface will involve much waste and draw the roots to the surface, which are cut off in plowing. To plow manure under cannot be done so that none remains on the surface. Cultivating it in is still worse, permitting much of it to remain on the surface. To draw furrows, fill in the manure and cover with another furrow saves all the manure, but reaches only a small surface.
2. Are citrus trees attacked by root knot?
3. Can Australian navel be made to bear as well as other kinds of oranges? I did not succeed in getting a good crop from them and others have the same complaint.
4. When should citrus trees be budded?

North Ontario. JACOB MAECHTLEN.

We should thoroughly compost the manure by keeping it moist and occasionally shoveling it over until it is thoroughly broken down and shows no coarse fiber. Apply all over the surface at the first rains and plow in so as to cover as well as possible; but if the manure is well decomposed, and the rainy season coming on, it does not matter so much about complete covering. In manuring light soils in a dry part of the State, the question of the thorough de-

composition of the manure before the application is more important than the manner of applying it.

We never heard that root knot such as now gives us most trouble in this State had appeared on citrus trees. There is a different knot on citrus trees sometimes, but we have not heard of it in California.

The Australian navel is a shy bearer in most places. We don't know anything to do to cure it except to bud over to a better variety.

Budding citrus trees is done about this time of the year or may be done later. Whenever a new growth is starting the bark lifts well.

### Killing Morning Glory.

TO THE EDITOR:—Will you give me instructions how to get rid of "morning glory?" This little wild plant bids fair to prove a great nuisance in our vineyards. It spreads and lives where we hoe and cultivate every week or two, and while using the weed cultivator or cutter.

Has any one tried drowning or scalding it out? If this is a remedy, we have the water facilities to practice it.

We have also prepared portable fencing and will put pigs onto the morning glory by sections. We have observed that the spreading of the plant was arrested by a narrow pig walk, used sufficiently to prevent grass from growing. This would seem to prove that the plant does not spread by the roots deep, as they extend downward and during a term of six or eight years, while it spread in other directions over acres of vines and in the sodded fence rows. It spreads very slowly in foxtail grass, which almost arrests its growth, especially in hard, dry, or uncultivated lands.

As I am about to make experiments for the destruction of morning glory by the acre I would like to hear the experience of others so as to know what I should do and what not to do. I have been alarmed at seeing it go into the barn with wheat hay, cut in bloom, but showing some green seed. I fear its being spread with the manure.

Fresno.

I. S. ESHLEMAN.

Who can help Dr. Eshleman with some new suggestions on this subject? The only cure we know is that of cutting constantly with a weed cutter (a sharp horizontal knife), running so as to pass under the whole surface and run so often that the plant is never allowed to show a shoot on the surface. It is of no use merely to cultivate or "weed-cut" as you would for other weeds. This spreads the pest more and more; but if you continually cut, *under the surface*, the rising shoots, and never let them get the light, you will kill the plant surely, but it may take two seasons to do it.

A good many have spoken favorably of corraling pigs on morning glory. They root out the roots very clean. But all who have tried pigs do not call them a sure cure.

We do not know how much "drowning" the plant will stand, but one can be very sure that no amount of flooding will phase it. Submergence might perhaps kill it, but probably the tules would grow on its untimely grave. As for cooking with hot water, that is not promising. Scalding near the surface would not do; probably nothing short of boiling the ranch in an iron pot would harm the morning glory. What can our readers advise?—ED.

### Gleanings.

LOCAL railroad rates on green fruits between Sanger and Fresno have been reduced fifty per cent.

The thistle now invading Antelope valley is of the Russian variety, not the Canadian as has been reported.

THE San Joaquin island farmers are just now shipping out large quantities of onions upon orders from the East.

MR. HOOK, of the Los Gatos cannery, thinks the product of apricots in the Santa Clara valley will be much larger than has been expected.

SANTA MARIA Times: Wade Sawyer's forty-acre bean field west of town is reported as badly damaged by grasshoppers. There are several swarms of them in the west end of the valley, but not in sufficient numbers to cause much alarm.

ACCORDING to the Redlands Facts, one Redlands orange grower, who has twenty-seven acres of grove, has sold his fruit this year for about \$10,000, which will give net to the owner about twenty-five per cent interest on his investment.

JAMES SWEENEY of the El Dorado County Fruit Growers' Union writes: "Our Union intends to ship our own fruit direct East this season without the assistance of commission men. All fruit growers not wishing to become members of our Union may aid and assist us in the way of making up carload lots."

WINTERS letter: G. W. Hinckley, of the Sky High ranch, made the first shipment of peaches to the East for the season last Tuesday. Mr. Hinckley also made the first shipment of apricots to the East this season. They sold for \$1 a pound. F. H. Buck made a shipment of several boxes of Peaches to the East on Wednesday, being a close second.

THE Pajaronian reports that the apple crop is going to be

light in the vicinity of Watsonville in comparison to the crop of 1894. This applies to nearly all varieties, and especially to the Newton Pippin. In the Corralitos and Green Valley districts the crop will be better. The Menasco, Brown and other apple orchards at Corralitos are heavily loaded.

J. D. PETERS of Stockton is quoted by the Mail as follows: "Bartlett pears and apricots would be failures in this region. The peach crop will average fairly well and the grape crop is setting well also. There is a prospect of a fair crop of Winter Nelis pears this year, but the Bartletts and apricots will hardly amount to anything. It is too soon yet for the cannery men to buy fruit, and it is hard to say now what the price will be."

A GRANGEVILLE correspondent of the Visalia Delta says: A man in this neighborhood had seven hogs that were in prime condition and the hog buyers offered him thirty-five cents more on the hundred pounds than they were paying his neighbors, but he refused to sell, believing he could make more by killing and selling the meat and the lard. So he found that if he had sold to the buyers he would have received \$96 for the seven hogs, but by working the hogs up into bacon, hams and lard he made just \$250 out of the porkers, or \$154 for his work, and he hired about all of that done. Although the last of the pork was sold last winter, orders are still coming in for it. We may say that the gentleman has a name of offering for sale nothing that he would hesitate to eat himself.

FROM Sutter county: Prospects in this county are improving and the general output of fruit will be large. There will be considerable apricots and a fair run at the Yuha City cannery is expected. Peaches are plentiful and the average pack of the same will be made. Many of the pear orchards are not so badly affected as was first reported, and the prune crop is showing up very well. There will be plenty of grapes. Nothing definite can be said as to prices. Some peach crops have been contracted for at 1c per pound and apricots at 1 1/4c, but whether these prices can prevail or not, cannot at present be determined. The cannery directors will meet next Monday and will probably fix prices under which they will contract fruit for.

ONTARIO Record: There has scarcely ever been a more propitious outlook for the bee business in Southern California, says the Azusa Pomotrophic. All over the valley, mesa and mountain great canes of sage are hurrying into bloom, some of which have reached the remarkable height of fifteen feet, and are as large and verdant as asparagus shoots. Besides, the bee men are to be protected from the bogus honey makers, as the dairymen are from the manufacturers of oleomargarine. The bill has been duly approved by the governor, making it a severe penalty to sell anything for honey that is not the pure, unadulterated product of the hive. Altogether the prospects for prosperity in this great industry are good, and the outlook will, in a measure, neutralize the disaster of last season.

J. D. LINCOLN, of Southern California, has recently been in Florida and writes home as follows: I found things in Florida in bad shape and the people feeling sad and poor. Many groves have nothing done to them, the owners having lost their all and have nothing to do with. Those who are trying to save something from the wreck are cutting the limbs from the trees for new sprouts, but the most of them will have to cut the trees down and try to save something by having them start anew. If they do not have to cut the trees off below the old bud they will save new budding and get some fruit inside of three years; but it is hard to see whole orchards cut nearly to the ground, and it requires a good deal of nerve to go on and do this work in the face of the past, and it is only nine years since the most of the fruit was destroyed by the freeze of '85 and '86.

TULARE Times: N. W. Motheral, horticultural commissioner of Kings county, inspected a number of vineyards within the last day or so that are being invaded by worms. He has also examined the worm, and decides that it is the regular army worm that in the spring of the year have the habit of the cut worm. This worm is not only destroying vines, but in places have stripped alfalfa of its leaves. If anything is to be left in our vineyards and alfalfa fields this worm must be destroyed. The best plan to fight the insect is to dig trenches, twelve to fifteen inches in depth, with perpendicular banks, so the worms cannot climb out; then every fifteen or twenty feet dig holes where the insects can accumulate. Then at these holes pour coal oil on them, and this will kill them. Where they have stripped the young branches of their leaves the branches should be pinched off, that they may grow out again and produce fruit, which they will do again in a week or two. If young branches are not thus treated they will contain no grapes this season.

THE Mountain Fruit Co. of Colfax has just won an important suit for damages against the Southern Pacific Railroad Company. Judge Prowett's decision is as follows: "It appears from the agreed statement of facts that the defendant received from the plaintiff one carload of green fruit to be forwarded to New York by passenger-train service. The way bill calls for a shipment to Ogden, but the goods were addressed to New York and the full amount of freight was paid to that city. On the face of the way bill, immediately following the address, is inserted the statement that the goods are to have passenger-train service through. The "through" can mean only the destination of the goods. The collection of the whole amount of freight to New York City and the undertaking to provide passenger service through, imposed upon the railroad company as a legal duty to see that the fruit was not delayed on the way to its injury. For the purposes of the contract the defendant constituted the connecting roads its agents. It would seem as void of right as it is of law for the court to hold that the railroad company could reap the fruits of the bargain without bearing its burdens. It received price for shipment and it must bear the burden of its contract. The goods were injured while in transit, as the result of delays. There is no pretense that delays were necessary or that they were caused by superhuman obstacles. My conclusion is that the plaintiff is entitled to the full amount of damages shown by the agreed statement of facts. Let judgment be prepared accordingly."

Good bedding that is clean and free from the odor of ammonia given the horse enables him to do more work. The habit of an opportunity to rest, and consequently using old bedding over and over again, breeds disease and causes annoyance to stock.



## Rainfall and Temperature.

The following data for the week ending 5 A. M., May 28, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA<br>STATISTICS. | Total Rainfall for the<br>Week. | Total Seasonal Rain-<br>fall to Date. | Total Seasonal Rain-<br>fall Last Year to<br>Same Date. | Average Seasonal Rain-<br>fall to Date. | Maximum Temperature<br>for the Week. | Minimum Temperature<br>for the Week. |
|---------------------------|---------------------------------|---------------------------------------|---------------------------------------------------------|-----------------------------------------|--------------------------------------|--------------------------------------|
| Eureka                    | 1.01                            | 45.79                                 | 53.35                                                   | 42.60                                   | 70                                   | 44                                   |
| Red Bluff                 | .46                             | 28.85                                 | 21.02                                                   | 24.80                                   | 88                                   | 48                                   |
| Sacramento                | .21                             | 24.11                                 | 15.60                                                   | 21.60                                   | 80                                   | 50                                   |
| San Francisco             | .24                             | 25.64                                 | 17.90                                                   | 24.05                                   | 64                                   | 48                                   |
| Fresno                    | T                               | 14.14                                 | 7.28                                                    | 10.80                                   | 88                                   | 46                                   |
| Los Angeles               |                                 | 15.91                                 | 6.64                                                    | 10.72                                   | 74                                   | 48                                   |
| San Diego                 |                                 | 11.60                                 | 4.18                                                    | 10.64                                   | 70                                   | 56                                   |
| Yuma                      |                                 | 2.97                                  | 2.16                                                    | 3.56                                    | 100                                  | 58                                   |

## Weather and Crops.

Report for the Week by the Director of the State Weather Service.

Director Barwick of the Weekly Weather and Crop Service summarizes as follows:

The average temperature for the week ending Monday, May 27th, was: For Eureka, 52; Fresno, 66; Independence, 68; Los Angeles, 62; Sacramento, 63; San Francisco, 56; San Luis Obispo, 56, and San Diego, 62.

As compared with the normal temperature, there was a heat deficiency at all points as follows: Eureka, 2 degrees; Fresno, 4; Los Angeles, 3; Red Bluff, 6; Sacramento, 3; San Francisco, 3, and San Diego, 1.

The total precipitation was: For Eureka, 1.10 inches; Fresno and San Luis Obispo, a trace; Independence, Los Angeles and San Diego, none; Sacramento, .21 of an inch; San Francisco, .20 of an inch.

The cool weather during the week, and the showers in the latter part, were beneficial to late grain and fruits in general, but some slight damage was done to cherries that were ripe and hay that was cut and lying in the fields, but the benefits derived from the showers have been much greater than any slight damage that may have occurred. The weather, therefore, has been beneficial to all summer crops.

## Sacramento Valley.

TEHAMA (Corning)—Weather favorable for filling out of grain, which promises to be plump and heavy. The rain will damage hay to some extent, but will help late-sown grain and also fruit. Grapes will be fine.

COLUSA (Grand Island)—Wheat is heading finely; haying in progress and crop a heavy one. (Maxwell)—Farmers are cutting barley; the quality is excellent, as is also the prospect for wheat.

BUTTE (Pentz)—The hay crop is mostly secured and is the heaviest for years, and of excellent quality. (Burham)—The conditions during the week have been favorable for the grain and fruit crops.

YUBA (Marysville)—The cool weather has been exceedingly favorable for all kinds of grain and fruits; haying has been progressing well and a large crop is being cut. The rivers have fallen, and many are reseeding their alfalfa bottoms in the hope of yet raising a crop. (Wheatland)—Weather favorable to grain. Hops are making rapid growth, and all yards are in fine condition.

SACRAMENTO (Elk Grove)—Grain crop looking well, and the rain is most excellent for the late sown. Barley ripening fast. The prospects are excellent for a good grape and hop crop. Pastures are drying up and stock is being moved to the mountain ranges, except those on river bottoms where pasturage is still very good.

YOLO (Grafton)—The hay crop is coming with a rush, but there will hardly be as much of it as usual. The corn crop will not be so large in this vicinity as it was last year. (Dixon)—Peaches and plums will be a full crop, pears will reach probably a half, cherries a third and apricots a fourth of a crop.

## Napa Valley.

NAPA (Napa City)—Haying in full blast and of good quality. Grain crop doing well; cherries ripening nicely but crop will be small; grapes promise well.

## Sonoma Valley.

SONOMA (Forestville)—Alfalfa hay being cut. Berries looking fine; grapes are all right and the crop is expected to be a large one. The cherry crop will not average a fourth of a crop. (Sonoma)—Prunes are falling a good deal. (Sebastopol)—Weather favorable for all crops. Hop and grape vines are growing finely. We look for a good crop of apples, a medium crop of peaches, though very few clings. Pears blighted; crop light; prunes a half crop; canning plums a light supply; a few black cherries and a light crop of white.

## Santa Clara Valley.

SANTA CLARA (San Jose)—The prune crop will pretty nearly approximate that of last year in amount and in quality will be much superior. The drop has been heavy. Plums have generally done better than prunes. Pears are uniformly short, probably from a fungus trouble affecting the blossoms. Apples seem full and generally need very much thinning. Almonds, though reported cut by frost, are generally bearing well, and a good fair crop may be expected. Grapes are blooming well and so far look fine.

## San Joaquin Valley.

SAN JOAQUIN (Lodi)—Weather favorable to all crops. Haying about over and acreage larger than usual, with the quantity and quality good. Wheat and barley approaching ma-

turity and promise to be of good quality. Melons are growing slowly, and will be late in fruiting. The fruit crop of all kinds will be short. Almonds are spotted, some orchards showing fair and others not one-fourth of a crop.

STANISLAUS (Turlock)—There has been some very high winds during the week, blowing down some of the rye crop. (Crow's Landing)—While all crops are doing well, the yield will not be what was at first expected. (Westley)—Early-sown wheat and barley are looking fine, and the yield will be good, while the late-sown will not amount to much.

MERCED (Los Banos)—The army of grasshoppers have arrived at Buchanan and Raymond in their march across the plains, and everything in the green line is being cleaned up in short order.

FRESNO (Reedley)—Winter-sown grain rusting considerably; hay is being cut and the weather is good. Worms and caterpillars all disappeared from the vineyards; they did considerable damage in some vineyards, grapes beginning to set.

KINGS—The weather is all that could be desired for ripening both grain and fruit.

TULARE (Tulare)—A goodly portion of the grain crop is shrinking and drying up, particularly the late sown where not irrigated. Alfalfa hay crop has suffered from the army worm, there being whole fields where the leaves are eaten off; even the vineyards suffered to some extent.

## Southern California.

SANTA BARRERA (Nipomo)—Haying mostly over and the crop a large one. Barley and wheat maturing nicely and will soon be ready for the reaper. Some patches of wheat are affected by the rust, but principally on the blades, and will do but little if any damage. The worms have greatly damaged, if not entirely ruined, some pieces of mustard. They have also stripped many of the last spring setting of fruit trees. Corn and other spring crops are looking better than usual at this time of the year. (Carpentaria)—Beans never came better than they are now doing. The cut worms are working sad havoc in many fields of alfalfa. The worms eat the young shoots as soon as started.

VENTURA—Some complaint that lima beans have not come up evenly; ground too cold and some have rotted. Hay yield is good and is being cured in fine condition. Bee-keepers are expecting the season's yield to be moderate—much less than predicted earlier in the season.

LOS ANGELES (Los Angeles)—Weather favorable for the growth of all crops, except it was a little too cool for rapid maturing of fruits. Hay is coming in and the crop is a heavy one.

RIVERSIDE (Arlington Heights)—Deciduous fruits are doing well. Nectarines, almonds, and some varieties of peaches are bearing heavily.

SAN DIEGO (Nuevo)—The major part of the hay crop in the valley is now cut, and the balers will be getting to work in a few days.

## Coast Counties.

HUMBOLDT (Eureka)—The weather has been favorable to vegetation and gives an assurance of good crops.

MENDOCINO (Ukiah)—The misty and cloudy weather good for late grain. The worms have injured some alfalfa fields and also potatoes.

SAN BENITO (Hollister)—The cool weather was favorable for grain, but there was plenty of sunshine for hay making, and a large crop of hay is being cut.

SAN LUIS OBISPO (San Luis Obispo)—Hay will be about an average crop. Fruits are doing fairly well, but curl leaf is making great havoc in peaches. Grapes are doing well. Highest and lowest temperatures, 72° and 42°.

## Mountain and Foothill Counties.

MONOC (Adin)—Light frost Wednesday morning, but no damage reported.

SISKIYOU (Ager)—Fall-sown wheat stands the dry weather quite well. The rain is good for grain. Highest and lowest temperatures, 84° and 34°. (Yreka)—The heavy frosts of the 21st, 22d and 23d have done considerable damage. Fruit was nipped quite severely, but how much cannot be told until later on. Alfalfa was frozen in some places. Grain is doing well.

SHASTA (Shasta)—Crops doing well. Grapes setting well; peaches in good shape; cherries light. Haying is well advanced. The rain is good for all crops.

PLUMAS (Loyalton)—There is a greater area of land sown in various kinds of cereals than any former season, and the farmers are expecting a good harvest.

## A Lively Honey Flow This Year.

Dr. E. Gallup of Santa Ana, Orange county, writes to the *American Bee Journal* of the honey flow of this year as follows:

Now, if any of you Eastern people are congratulating yourselves that California is going to produce but very little surplus honey this season on account of the loss of bees, etc., don't flatter yourselves on that head. You may be mistaken.

I was talking with Mr. Oderlin, who resides here in Santa Ana, and runs a bee ranch up in the foothills. He says his bees commenced swarming March 20th, and have kept it right up. He commenced extracting April 2nd, has taken out one ton, and the hives were full again for the third extracting by the end of April.

California vegetation and flora are immense. The foothills and mountains are covered with a vast variety of wild or natural flowers, which would astonish any person not acquainted with the climate and its capabilities. It must be seen to be appreciated, or even comprehended. Bees were never in better condition so early in the season than they are now. This is the universal condition so far as heard from. One beekeeper tells me that he not only has his original number of colonies, but is away ahead, and all are in the very best possible condition; and that, too, after a loss of about one-half the past year.

It is just fun, as I said in a previous article, to build up and make increase, when one has the ready made combs, in this climate. Mr. Oderlin's increase this year was all from natural swarming, and he has put the greater proportion of the swarms back, as he did not want so much increase. Recollect that the season is earlier in the foothills, or low down, than it is higher up in the mountains. But the season lasts, or continues, later in the higher altitudes. Now, recollect another phase of California beekeeping, that is, that the plow or stock can never inter-

fere with the mountain apiary, as many of the ranges are inaccessible to both.

When one can select a location with foothills on one side and high mountains on the other, the bees take advantage of both the early and late pasturage or honey flow.

## The Wool Markets.

We extract what crumbs of comfort there are to be found in the reports of the Eastern wool markets for the encouragement of our flock owners:

At Chicago during the first half of May there was considerable wool moving, and it consisted largely of territory fleeces. Western mills are getting to be heavy consumers of territory fleeces, purchasing as large an amount as a half million pounds of a special grade at a deal, and frequently manufacturers will take one and two hundred thousand pounds. Nearly all of these territory wools were sold at the scoured pound value, and as this market received a large proportion of choice fleeces, the net returns to the growers have consequently been quite satisfactory, and Chicago wool merchants will be favored with liberal shipments this season—in fact, over two million pounds of territory wool has already been received. The crossbred wools brought in from South America have been purchased pretty freely by worsted spinners, and at a lower figure than domestic staple fleeces were selling, consequently trade in this class of wool has been very slow lately, and when a lot was sold the price was made a consideration. Domestic wool in all grades will be wanted, and the growers should take pains to put their fleeces in nice marketable condition, so they will command the outside figures.

At St. Louis receipts of bright wools are liberal, and merchants report expressions of satisfaction from their shippers of sales made up to date. It seemed before the season opened that it would be almost impossible to satisfy growers at the ruinously low prices, yet it does seem that the general decline of wool for the past three years has prepared the growers to be content with this year's market, and hope for better things in the future. Territory wool is later arriving in our market this year, but some clips, and fairly large ones, too, have arrived, and met with ready sale.

At New York very little domestic wool remains unsold, but there are large lines of foreign stock, and manufacturers in want of almost any class of imported wool can readily be supplied. There has been some inquiry for foreign wool, and an increase in this branch of business, still it does not meet expectations. Wool suitable for carpet manufacturers is perhaps the steadiest and least to fluctuate in value of any imported stock, and yet the carpet mills have not been kept running all the time. The market can be said to be a waiting one, as no special activity in domestic wools is expected until receipts shall have greatly increased and values more fully established.

At Philadelphia the past month has been a clearing out of old lots, and the arrivals have consisted mainly of territory and fat-sheep wool, the latter being abundant, while the call is limited, the shrinkage being excessive, and the scoured pound at the prices asked for this class of fleeces costs more than manufacturers are willing to pay for the stock. It is possible that the tone of the market may improve somewhat, now that the London sales of Colonial wools are a shade better than at the opening, and that our wools will at least sell with more freedom even should no higher prices prevail; still, this condition of the market does not warrant any speculation in territory or domestic fleeces, and simply means that a greater activity is likely to prevail at about current values at the distributing points. Manufacturers have fair orders for goods, but are unwilling to pay any higher prices for wool, and, being well supplied for near wants, they are quite likely to defer purchasing any considerable line of wool until later in the season; meanwhile selections will be better and the market more defined.

## Keeping Everlastingly At It Brings Success.

Genius is really only the power of making continuous efforts. The line between failure and success is so fine that we scarcely know when we pass it—so fine that we are often on the line and do not know it. How many a man has thrown up his hands at a time when a little more effort, a little more patience would have achieved success. As the tide goes clear out, so it comes clear in. In business sometimes prospects may seem darkest when really they are on the turn. A little more persistence, a little more effort, and what seemed hopeless failure may turn to glorious success. There is no failure except in no longer trying. There is no defeat except from within, no really insurmountable barrier save our own inherent weakness of purpose.

Horsemen who attended the autopsy of Ralph Wilkes say they never saw a heart of such enormous size taken from a horse as that removed from Colonel Thayer's great stallion. He also had a remarkable set of lungs.



## HORTICULTURE.

### Earthworms and Their Work.

TO THE EDITOR:—As there is some wash thrown out to me by your San Jose correspondent about the usefulness of angleworms, please permit me to wash it over before we put it on the line. I must inform him that I studied up no worms at all; I only observed their doings toward plants, etc., as every intelligent gardener does. There is surely no one so lazy as to need such worms as helpers. It might suit your correspondent as it might a good many farmers, who possibly would enjoy looking over the fence to see the worms struggling along in stirring up their ground. They could then keep up their "jawgraphy" with their neighbors about hard times, occasionally turning around to either cool or warm themselves on one side or the other, and then if they cannot palm off their thistles for good hay they ask the Government to take a hold of them.

As to Mr. Raymond I may say that I have no theory to explode, for I presumed it was generally understood what harm those worms are doing, in spite of scientist's opinions. Of course, there are a good many who place famous men's theories above others' practical results. A professor once said to a mechanic about his new invention: "Yes, it's practical; it works finely, but in theory it is all different." It is as it was twenty-five years ago when the Frenchmen had a fine theory of their own, that they could use the Germans as footballs; but certainly it was not the Frenchmen's fault to have the game spoiled. Scientists give us too much in theory—too much for idle curiosity—but not enough beneficial facts.

But now for the angleworms again. There would be no more poor ground in existence if those worms would enrich the soil; the plants would all thrive luxuriously, and then in turn worms would fill the ground. These worms live only in rich soil, especially when enriched by stable manure and kept continually moist. They eat the rich soil or manure, also the finer young seedlings or the germs of seed. For this reason the seedsmen often get blamed for bad seed. On damp nights the worms come to the surface and feast on those tender plants. One can seldom see them at it as they are too quickly off by approach of light. They honeycomb the soil in search of their food and by their slimy effluvium will make even light soil sticky and heavy, and in spite of all that perforation the worms' work prevents the free penetration of air, consequently the soil sours. If the soil is then worked out or dried up, the worms will leave or die. In the latter case they are of some benefit to the soil as decaying animal matter. These worms are not so bad in climates where frost penetrates deeply, and then the season is too short for their multiplying to a great extent; but in a climate like ours, especially in gardens where there is no drying up allowed and the soil cannot be stirred, one will soon see the bad effect, particularly on potted plants. Therefore, such ground should be allowed to dry up once a year to some extent, as far as the plants will stand it. This will renovate the ground a great deal, just as the frost serves in other places. These facts will be agreed to by every intelligent gardener. HENRY MELDE.

Eureka, Cal.

There is no need for further discussion of this matter. There is no question whatever that under such conditions as Mr. Melde mentions in his last paragraph, and such as Mr. Lyon presented in his recent letter, worms are a ruinous agency and must be reduced. This fact does not at all impeach Mr. Darwin's wonderful work. Practical men are too much disposed to decry science and to call it "theory." Mr. Melde has a theory that worms are vicious, because under his condition he sees their ill effects. Mr. Darwin had a theory that they were beneficial, because he saw what they did under the conditions in which he observed them. Mr. Melde's view is just as much a theory as Mr. Darwin's—in fact, infinitely more so, because Mr. Darwin considered a thousand facts to Mr. Melde's one. No man ever lived who had more profound appreciation of a fact than Charles Darwin, and his works are mountains of fact. But Mr. Melde is perfectly right from his point of view, and he has facts enough to warrant him in his theory of worms. Busy men do not usually remember that point of view materially changes an aspect. Mr. Darwin might have written a book on the cow as the foundation of human prosperity, and put facts in it which would cause the world to wonder at his powers; but if Mr. Darwin's cow should get into Mr. Melde's garden, Mr. Melde would be justified, from his point of view, in pronouncing Mr. Darwin the rankest theorist in the world. Now don't let us quarrel about this matter. A weed is a

plant out of place; a pest is an animal out of place. There are quite a number of conditions under which worms are pests and must be routed out. On the other hand, in the great economy of creation, worms have done a most beneficent service. Under some conditions food is poison; under other conditions poison is food. Observe closely the conditions under which you labor and shape your practice and your views accordingly, but do not denounce men holding other views nor deny their facts until you are sure they come upon your ground and consequently are at variance with what you know to be true.—Ed.

### Apricot Growing in Southern California.

By MR. HENRY JOHNSON, of San Pasqual, at the May meeting of the Southern California Pomological Society.

Apricot culture has extended over a large portion of southern California. The localities best adapted to its cultivation, however, are the foothills and higher portions of the interior valleys, with a warm and even temperature. Low, wet and cold localities should never be selected for apricots, for there the crop will be irregular and uncertain. On such places, too, the trees are frequently infested with scale.

In planting an apricot orchard, the time of setting out the trees is of very great importance in order to insure success. It is generally well understood that the trees should be planted before the buds begin to swell in the spring; but it is of equal importance to plant them before the roots start to grow, and this takes place long before the buds swell—generally about the middle of February and sometimes earlier.

Medium sized trees with plenty of fibrous roots are preferable for planting to large overgrown ones with coarse roots. After the trees are planted they should be cut back and watered immediately. If thorough cultivation is then kept up all through the growing season, a splendid tree growth can in most places be made without irrigation. If water for irrigation is available, however, it can be applied to good advantage in producing large tree growth. Bearing trees especially are benefited by watering them when the fruit is grown to about half its natural size.

*Methods of Curing Fruit.*—In order to produce a good article it is necessary to allow the fruit to ripen on the trees. The gathering of the fruit can often be facilitated by placing a large canvas under the trees. This should be split from one side to the center in order to fit up snugly around the body of the tree, and also cover the whole surface of the ground under the limbs. A judicious person can shake the limbs gently with a pole and bring down the ripe fruit without knocking off the green. This will lessen the expense of picking materially. After the fruit is cut and placed on trays it should be sulphured as soon as possible, as it turns dark quickly after being exposed. For convenience in sulphuring, a practical way is to stack the trays filled with fruit in solid piles five feet high, eight feet long and three feet wide. Then make a light frame, well braced, to fit over this pile. Cover this with tarred paper and you have a cheap and convenient sulphur house. Two men can readily lift this off and place it over the trays when they are ready to sulphur. After it is removed the trays are easily handled for spreading, as they stand in single row. The length of time required for sulphuring varies with the tightness of the box used for that purpose. Generally from three to four hours is sufficient, or at least till the cups of the fruit are half filled with liquid. Sun-drying the fruit is generally practiced in the southern part of the State, where there is very seldom fog or rain during the drying season, excepting near the coast.

Properly speaking, the fruit should be cured, not dried. After being exposed to the hot sun till it becomes limp or half dry, the contents of two trays should be dumped and spread evenly over a third also containing fruit. This should then be covered with an empty tray, turned bottom side up so as not to touch the fruit, and allow the air to circulate over it. In this condition the fruit undergoes a process of curing, by which the sweet juice forms into a syrup and is crystallized instead of evaporating. If the fruit is taken up in the heat of the day and placed in tight boxes, worms will never trouble it.

*Cost of Production.*—In a favorable locality, from the time the apricot trees are six years old they should produce an average yield of 250 pounds of fresh fruit to the tree one year with another, and when properly cured five pounds of fresh fruit should make one of dry. Taking this as a basis for compounding the cost of production, we find the expense of producing one pound of dried apricots for the market will be a little less than four cents. Allowing seventy-three trees to the acre, when dried fruit is selling at five cents per pound, would give us a clear profit of \$35 per acre, besides allowing liberally for labor. While there is no great cause for enthusiasm over these figures, yet they make a favorable comparison with other branches of industry in these times. These figures, however, are based only on localities favorable to the apricot, like San Pas-

qual—the "Gem Valley." There is but one safe rule by which to be guided in making a selection of the varieties of fruit to plant in any locality, and that is to plant the variety for which the locality is best adapted.

In every vocation in life there are men who make a success of their business. There are others with equal chances of success placed before them who fail. So in horticulture there will be many in the years to come who will make it a grand success, at the same time there will undoubtedly be some who will make failures; but the "survival of the fittest" will prevail. To the imperial State of California—to this magnificent empire of the West—the people east of the Rocky mountains are looking each year for a large part of their fruit supplies. Many of them are coming to live here. To all such we give the benefit of our experience, and will welcome them to our glorious country—land of eternal sunshine, with fruits and flowers.

## THE DAIRY.

### A Plea for the "Common Cow."

"And the plain cow,  
That harmless, honest, guileless animal,  
In what has she offended?"

TO THE EDITOR:—As no one has replied to a "Working Dairyman" on the subject of testing graded cows, I take the liberty of saying a very few words in behalf of that class of dairy cows to which I belong, and which I may call the majority, if not a *breed*. Therefore, seeing that I am not one of that "herd-book stock," as he calls it, that has been beat by a grade in tests that are past—fairly and honestly beat, too—I see no reason why such as I am should not be allowed to show forth my merits under the same conditions and privileges as are given the different breeds of "herd-book stock."

I have changed the poet's "ox" to "cow;" and though we do not, like the ox in ancient times, by "patient toil clothe the land with all the pomp of harvest," yet we, the plain or common cows, do more towards feeding the "teeming millions" of the dwellers of the earth not only by our productions of "luscious milk," but by breeding the ox that furnishes the flesh that nourishes mankind in all his strength and greatness, than any other animal in existence. Then, I say, give us fair play, and leave us not as it were only "the sigh for suffering worth lost in obscurity," or to be "the noble scorn of tyrant pride."

No, Mr. Editor, in place of discouragement, we want to be "brought out," and our present merits improved upon. It is true there are a good many bad ones amongst us, but there are also a fair proportion of good, and some that are very good, a truth which applies to all classes of animals, in their respective spheres, so that we are no worse than the rest of the world. As I am not discussing the merits of "breed," not being of one myself, I will leave the Shorthorn, the Jersey and the Holsteins, and the Ayrshires, too, if they be inclined that way, to have their say and speak up for themselves, but one thing I can assure you of, if we are left out in the cold we will have our revenge. We will kick, we will "hold up" our milk; we may, in fact, plan a boycott against the milkers, or go out on a "strike;" then what will you townsfolk do when you have neither milk nor cream coming in from the

COMMON COW.

P. S.—I enclose my name and address, by which you will perceive that I am in one of the "cow counties" of California.

### How Loss Results from Competition with Cheap Imitations.

Essay read by D. K. ZUMWALT before Tulare Grange.

The products of the dairy, like everything else that is true and good, have imitations and frauds. The most common of these are oleomargarine, butterine and filled cheese. The ordinary dairyman little realizes the extent to which these frauds are manufactured, or the consequent loss and ruin to the dairy interest.

It is impossible to obtain full statistics of the amount made or sold, as in many States there is no law to prevent it; and men who are willing to perpetrate such frauds for the money there is in it, like other thieves, are not anxious to advertise their own dishonesty.

These articles are sold nearly all over the land as pure butter and cheese, nor is this confined to our own country. Foreign countries finding out that we had been practicing this deception upon them were cutting off their commercial relations with our country and buying elsewhere to such an extent as to cause an investigation by the Merchants' Exchange of New York.

This investigation shows that millions of pounds of oleomargarine were exported to foreign countries each year, and that very rarely a package is shipped for what it really is. Up to July 6, 1891, all oleo exported to tropical climates under rules of the Lu-



ternal Revenue Department had to be branded on tin and package, "oleomargarine," and very little was shipped; but on that day the oleomargarine men got the Commissioner of Internal Revenue at Washington to rule that the case in which the tins were packed for shipment was the package referred to in the law, which had to be marked. Consequently, though they marked the outer cases "oleomargarine" so as to pass the customs house, yet the contents—the cans—were branded "butter." This continued till the spring of 1894, when the commissioner ruled that the tins should not be branded "butter," so now they are putting on such brands as: "Extra Elgin Creamery," "I X L Dairy," "Fancy Goshen," "Empire Creamery," "Western Dairy," and such other names as signify butter. The department has been notified of this, but the creamery men have not been able thus far to get the administration to act. Recently, comes through the press the more astounding statement that the Hon. Sterling Morton, Secretary of Agriculture, actively and openly opposed the adoption of the "anti-oleomargarine" law in the State of Nebraska. Of all others, we have a right to expect our Secretary of Agriculture to look out for and foster our true agricultural and dairy interests and to do all in his power to suppress such frauds and deceptions as are only adding millions to the few who have already grown rich from stealing the reputation of the true article, while thousands of honest producers, North and South, are being driven, by the underselling of this spurious article, to poverty and want.

J. R. Dodge, formerly statistician of the Department of Agriculture, said before the Dairy Congress, February, 1895: "There were 90,000,000 pounds of oleomargarine exported from the United States annually, while the butter exported was but 9,000,000 pounds."

According to the report of our State Board of Agriculture dated Feb. 1, 1895, we have in California 330,000 cows in service, with a yield of 156,239,066 gallons of milk annually, of which about 50,000,000 gallons is consumed as fresh milk.

Incidentally, it may be stated that a single cow produced over three pounds of butter per day at the test during our last State Fair.

In 1894 the products of the dairy in California were valued at \$14,500,000—second only to the wheat industry.

According to a formula used by Armour & Co., and put in evidence in a lawsuit in New York giving the composition of oleomargarine, the materials used to manufacture 100 pounds of oleomargarine would cost but \$4.96, of which the farmer would realize but \$3.09, as follows:

|                          | Wholesale price, nearest market, per 100 lbs. | Cost of material in 100 lbs. of oleomargarine. | Am't paid to farmers for same. |
|--------------------------|-----------------------------------------------|------------------------------------------------|--------------------------------|
| Leaf lard, 34%.....      | \$5 15                                        | \$2 05                                         | \$1 35                         |
| Oleo oil, 35%.....       | 8 00                                          | 2 10                                           | 1 44                           |
| Cottonseed oil, 12%..... | 4 00                                          | 48                                             | 12                             |
| Salt, 9%.....            | 1 00                                          | 00                                             | —                              |
| Milk, 18%.....           | 1 00                                          | 18                                             | 18                             |
| Totals, 100%.....        |                                               | \$4 96                                         | \$3 09                         |

During the last year more has been done in the way of legislating to protect the dairy interests in the United States than ever before.

True, the Hill dairy bill, which our Grange recommended, failed to pass Congress, but its discussion served to arouse a healthy sentiment, which I think has gone far towards inducing several of our State Legislatures to enact wholesome laws.

Wisconsin, which was the greatest cheese-producing State in the Union (a considerable part of which was filled), has enacted a very stringent law, which prohibits absolutely the manufacture of filled cheese, the coloring of oleomargarine or the selling or offering for sale any such imitation as butter or cheese, under severe penalties of the law.

Missouri, too, has just enacted a stringent law which will henceforth prevent the selling or serving of the fats of bulls or boars for butter.

Among other States which have amended their laws in this respect, or enacted new laws, stands California, with a brand new law which makes it a misdemeanor for a person to make, serve, sell or have in his possession any article or compound made and colored in imitation of butter or cheese. The penalty for the first violation of the law is a fine of from \$50 to \$250, or imprisonment not to exceed six months, or by both such fine and imprisonment. One-half of all fines collected shall be paid to the informant. A Commission has been appointed to enforce the law, and, with the assistance of dairymen and Grangers, this fraudulent business can be entirely wiped out of existence in our State.

When the horse balks it may be because the collar hurts him, and does not fit. There are many reasons for balky horses, and the horse is in the right sometimes, especially when he is overloaded.

## THE IRRIGATOR.

### Irrigation Practice at Riverside.

By MR. E. W. HOLMES, at the recent meeting of the Southern California Pomological Society.

I believe that absolute certainty of fruit crops is only assured where water is available. Sections that have done well without irrigating facilities have accomplished so much more with water that there are very few who from choice will depend upon the rainfall to perfect their crops.

The abuse of water by those having it in abundance has given opportunity in the past for those who had it not to show that ill results may come from its use, and to point to exceptional success gained in favored sections in good years with the un-irrigated product—especially of deciduous fruit.

No general rule for the use of water for irrigating will apply in all sections of the State where the conditions vary so greatly. This is now so generally understood that it is enough to refer to it.

The subject assigned me is so familiar that I can hardly conceive of anybody's being so unacquainted with it as to require a description of the methods which have come into use during the twenty years since I first ran out an irrigating furrow.

*Old Methods.*—The irrigation methods of Riverside have grown from the experience of twenty years, and have come in consequence to be practically uniform throughout that section. They are unquestionably the best adapted of any to the conditions of soil, climate, and water supply existing there, and they have been so generally followed in the newer fruit sections that it is fair to assume that they are not likely to be materially changed in the future. A prominent writer on irrigation recently called attention to the fact that the Riverside plan of irrigating in furrows was identical with that practiced by the Chinese vegetable gardens, and he seemed to think that the idea came from them. I think, however, that he is in error, and that it is the Chinese who are the imitators, since those who first used the plan in orchard irrigating had little acquaintance with the Chinese ways, and developed their system, as the Mongolians may have done, from their own experience, and the fact that it is about the only sensible way of applying water in such a soil.

The old Spanish plan of flooding was wasteful and laborious, and only suitable for such a crop as alfalfa, and only excusable in orchards where the custom of taking a "head" of water when one's turn came prevailed, under the crude Mexican system of dividing the water, which compelled it.

The basin system was better, especially where the soil was gravelly or sandy, or the supply of water was small; but it would never have served in such red clay soils which abound in Riverside and other prominent orange sections. In such soil either of these methods would have invited the early destruction of the groves from the scalding of the bark and consequent gum disease. To allow water to flood around orange and lemon trees would be unwise in any soil, but with such as that of Riverside and Redlands it would invite certain evil. It is otherwise in sandy soil, where by the time a basin is filled the water may penetrate to a sufficient depth and permit of its being turned upon the next tree.

These various methods were duly experimented with, but the greater economy of labor and safety of trees very shortly made the furrow, or Riverside system, the only one in use. It is now familiar to you all, I suppose.

*The Furrow System.*—Along the head of the tree rows is placed a flume of wood or cement into which the water comes from the measuring box of the water company. This is made large enough to carry water sufficient for all the furrows, and opposite each proposed stream is a little gate or outlet. A marker or irrigating plow has prepared the land to receive the water by making from four to six shallow furrows in each space between the tree rows. Into this the water is allowed to slowly run—that is, if the irrigator be an expert. If he be not a good irrigator he will turn into each furrow a head sufficient to push the water through in a hurry, and in so doing wash down to his neighbor or back into the river the best of his soil, to say nothing of the fertilizer he has sown in his orchard at much cost of time and money. It is too often the case that careless use of water wastes it and the land it should benefit. There are orchardists, however, who boast that they can run water a week without running off their land two per cent of the amount received; but these are few in number.

The hasty application of water has another disadvantage. Where it runs rapidly it has a tendency to form a "slickens" that seems to prevent the water from penetrating into the soil as it does when it moves slowly. Given time, it will soak so deeply that one may sink a hoe-handle its length in the deep and fertile soil.

It is only occasionally that the conditions are so favorable that it is well to allow the furrows to be over sixty rods in length, although eighty is the more common distance. The ideal distance is about forty rods, where the grade is perfect. When fur-

rows are too long, it is often the case that trees at the head have their roots drenched and scalded, while those at the end have not received the quantity needed. There are few orchards in Riverside where the grades make it necessary. In some cases, however, the flume is put at the side, and, to give a grade so that the soil may not be washed, the furrows are run diagonally or otherwise to prevent a too rapid movement of the water. But terracing is not popular, because it involves constant watchfulness and expense to save the washing out of the land by the giving way of a furrow. Sidehill orchards may offer some advantages, but certainly their irrigation must always be a source of great trouble and expense. Where the grade of an orchard is as it should be, it is possible for the irrigator, when water is once nearly through the furrows, to leave it to run by itself for half a day, or sleep comfortably at night with a reasonable hope that it will not go wrong.

I allow water to run forty-eight hours before turning into new furrows; and when the soil is in right temper, cultivate both ways to furnish the mulch of soft earth necessary to retain the moisture.

*Suggestions.*—The question of the need of irrigation, at least for citrus fruits, is settled, as is also the method of best doing it. But the orchardist has now to consider, as he never seemed disposed to do in former years, the necessity of economy in producing of his crop. If he expects a dividend he must put no money in irrigating plants which it is beyond the capacity of his orchard to pay. It is the misfortune of the southern California orchardist that he has based all his expenditures upon expectations induced by the marvelous profits of ten years ago. It is not popular to point out the danger of overproduction, but he will be a foolish horticulturist who does not recognize facts that are evident and that are liable to affect him vitally. Four years hence Riverside alone will ship 6000 carloads of oranges and lemons, and it is reasonably certain that the remainder of the State will supply more than an equal amount of citrus fruit to be marketed. It is probable that this is an underestimate, and that by that time the California crop will fully equal that of Florida's last full season. Florida's crop by that time will again become an important item. These are not alarming facts; they are worth considering as suggesting how certain it is that we cannot longer safely base our expenditures for irrigating systems upon the extravagant ideas of ten years ago. It is clear that we can no longer anticipate profits such as have sent so large a number in recent years into citrus culture. Those who follow it must study, above all things, a way to reduce cost of production, cost of picking and packing, and cheaper methods of marketing.

It costs just as much to grow a poor variety as a good, and we must therefore confine ourselves to the few that are of unquestioned desirability. It is useless to assert our belief in the excellence of what we have against the market's verdict. It is the consumer who must be suited, and it will be easier to cater to his taste than to convert him.

It is the same with the raisin, the apricot, the prune, etc., as with the orange and the lemon. Production of all is increasing. The olive has the cotton seed as a competitor. These facts demand of us a careful study of every department of our work: and as irrigation is the foundation of our horticultural success, it is well to start here in examining, if our methods may not be improved, at least as regards the cost of our plants and the expense of running them. In some of the private companies, salaries and litigation cost more than is proper, and in some of the irrigation districts the business has been put in the hands of those who, judged by the results, were, to express it mildly, manifestly incompetent.

In spite of increased production of fruit of all descriptions, horticulture in California can be made to pay as well as any other legitimate business, but not unless there is the same attention paid to details and such business-like management of our industry as gives success in other callings.

### Horse Notes.

A good grooming is as refreshing to a horse as is a bath to a man, and we should deny our animals nothing which brings comfort or adds to their healthfulness. While planning for the coming season, have a thought of the flies and insects which torment the horses, and decide whether you can not well invest in screen doors for stables.

Foals learn undesirable tricks when played with when young; they are, however, all the better for being nicely handled, taught to lead, and to understand the voice and gestures of the attendant. So handled, they become early tractable, and there is much less trouble when time for breaking, mousing and backing arrives.

Study how to tend and shape the hoofs of the colt, and endeavor to know enough concerning the horse's foot and its care to keep out of the hands of the bungling blacksmith. A fine, spirited horse may have a bungling gait or a lack of endurance from bad feet, which will hurt its value very materially, and too often it is all the owner's fault.



## THE FIELD.

## The Russian Thistle in California.

University Experiment Station Bulletin No. 107—By C. H. Shinn, Inspector of Stations.



RUSSIAN THISTLE—Detailed Figures.

Detailed figures of the Russian thistle: Fig. a, branch of mature plant, natural size; b, seedling about two weeks after germination, natural size; c, flower detached from the axil and remaining suspended by minute hairs, in the ordinary inverted position on a rolling plant, enlarged three diameters; d, flower viewed from above and in front, showing the calyx lobes connivent into a cone-shaped body, and the large, membranaceous, spreading wings, enlarged three diameters; e, seed with flower parts removed, enlarged five diameters; f, embryo removed from the seed, enlarged seven diameters.

Comparatively small modifications in the structure, habits and environment of a plant are capable of changing it from a harmless dweller by the wayside to a most aggressive enemy of the agriculturist. The law of evolution holds in the case of weeds as certainly as with flowers and fruit; Nature is producing new varieties of our common garden weeds which every now and then appear, and temporarily conquer wide territories of cultivated land. The so-called Russian thistle, or Russian cactus, poetically called by the Russian *moujiks*, "the wind witch" belongs to the class of "tumble-weeds" and furnishes an excellent illustration of these dangerous modifications in plant structure.

When we look for the parentage of this Russian "tumble-weed" we find that there is a common salt-wort, *Salsola kali*, known since early settlement along the Atlantic sea-coast, and described by Linnæus as growing in eastern Europe. The *Salsola* does not spread rapidly, and has never developed dangerous qualities as a weed, so far as studied in its normal form. But a sub-species or variety,—botanists have hardly determined which to call it,—seems to have been developed in the course of centuries on the immense plains of Russia and Siberia. This sub-species, slowly adapting itself to its environment, and struggling for life with other native plants of the desert and the "black-lands," became the *Salsola kali fragus*, the so-called Russian thistle of to-day, a weed whose eradication now taxes the best energies of the American farmer in Dakota.

The *Salsola* belongs to the *Chenopodiaceæ* family. Among its relations are several species of *Atriplex*, shrubby plants of the desert; the pig-weed, *Chenopodium*; the grease-wood, *Sarcobatus*; and another rolling weed, *Cycloloma atriplicifolia*. Botanically, therefore, it belongs with some of the worst weeds known to agriculture. It is an herbaceous annual, diffusely branching from the base and forming, under favorable conditions, a round, firm head, from one and a half to three feet high and twice as broad. Its growth is extremely rapid and the plant hardens so as to be quite thorny as early as August. Like the common tumble-weeds of California and the Middle West, the season of rolling is in the fall, when the action of the wind causes the root to break at the surface of the ground, and the plant is blown about over many miles of territory and often for many successive weeks. The seeds are held in place in the axils of the

bracts, by two minute tufts of coiled hairs, which prevent them from falling all at once. A large, mature plant will sometimes bear from 100,000 to 200,000 seeds, and the method in which these seeds are borne, as explained above, distributes them over an immense area. The popular literature of the subject is full of stories which illustrate this point. In one instance a farmer is said to have labeled a Russian thistle and twenty-four hours afterward the plant was discovered sixty miles away!

**TECHNICAL DESCRIPTION.**—The United States Department of Agriculture, Division of Botany, Bulletin No. 15, (1894) publishes the following technical description as drawn by Professor L. H. Dewey:

"*Salsola kali fragus* (L.) Moq. in D. C. Prod. XIII, 2, 187, (1849). Herbaceous annual, smooth or slightly puberulent; tap root dull white, slightly twisted near the crown; leaves alternate, sessile; those of the young plant deciduous, succulent, linear or subterete, 3 to 6 cm. (one to two inches) long, spine pointed, and with narrow, denticulate membranaceous margins near the base; leaves of the mature plant persistent, each subtending to leaf-like bracts and a flower at intervals of 2 to 10 mm. (about one-twelfth to five-twelfths of an inch), rigid, narrowly ovate, often denticulate near the base, spine-pointed, usually striped with red like the branches, 6 to 10 mm. (three-twelfths to five-twelfths of an inch) long; bracts, divergent like the leaves of the mature plant in size and form; flowers solitary and sessile, perfect, apetalous, about 10 mm. (five-twelfths of an inch) in diameter; calyx membranaceous, persistent, inclosing the depressed fruit, usually rose-colored, gamosepalous, cleft nearly to the base into five unequal divisions about 4 mm. (one-sixth of an inch) long, the upper one broadest, bearing on each margin near the base a minute tuft of very slender coiled hairs, the two nearest the subtending leaf next in size, and the lateral ones narrow, each with a beak-like, connivent apex, and bearing mid-way on the back a membranaceous striate, erose-margined horizontal wing about 2 mm. (one-twelfth of an inch) long, the upper and two lower wings much broader than the lateral ones; stamens five, about equaling the calyx lobe; pistil simple; styles two, slender, about 1 mm. (one-twenty-fifth of an inch) long; seed one, obconical, depressed, nearly two mm. in diameter, dull gray or green, exalbumenous, the thin seed-coat closely covering the spirally-coiled embryo; embryo green, slender, about 12 mm. long when uncoiled, with two linear, subterete cotyledons."

**INTRODUCTION INTO THE UNITED STATES.**—For many years the thistle has been a destructive weed in the barley, wheat and flax fields of Russia. It is even said that large areas near the Caspian Sea have been abandoned to this weed, which is continually extending to new territory. In 1873, some impure flax-seed brought from Russia and sold in Scotland township, Bon Homme county, South Dakota, contained seeds of this dangerous tumbleweed. A map compiled by the Agricultural Department in 1894, affords an easy means of tracing its gradual extension from Bon Homme. It seems to



RUSSIAN THISTLE, LOOSELY BRANCHED

have taken it nearly ten years for it to extend over the adjacent counties of Yankton, Douglas, Davison, Hutchinson, Hanson and Aurora. Probably during this decade it really obtained foothold in a small way over the larger part of North and South Dakota, but it hardly excited much serious alarm until 1880. After 1884, its advance was much more rapid, and by the close of that decade (1884-94), it was causing extensive damage over half the area of the Dakotas, and was recognized as rapidly gaining possession of the other half. Following along the lines of travel, and carried downward by irrigation ditches, it had appeared in many widely-isolated spots, each one of which was a new center of infection. It was already recognized as extremely dangerous in Minnesota, Wisconsin, Iowa, Nebraska, Illinois, Ohio and Colorado. It had reached the British line on the north, Kansas on the south, and Oregon on the west. The Government reports from which these facts have been obtained state that "the rapidity with which the thistle has spread, both in infecting new territories, and in thoroughly covering that already infected, far exceeds that of any weed known in America. Throughout about 25,000 square miles it is very troublesome, and is causing a large amount of damage." Other official reports place the losses of the wheat farmers of Dakota from this cause in 1894 at over two million dollars, a sum nearly equal to their annual State and county taxes.

The local distribution of the Russian thistle is chiefly by means of the winds. When the ground is hard, the light round masses, as previously noted, are driven for miles, scattering seeds along their track. Gusts of wind beat them back and forth, covering all the intermediate areas and sometimes the light seeds are blown from place to place independently. But this local distribution would not of itself have brought the weed to California for many years to come. The seeds are sent abroad in badly cleaned cereals, flax and other field crops, although they are small, and so easily separated, that only gross carelessness can cause much danger from this source. The seeds, however, are more often carried long distances in the bedding and litter of stock cars, or in crevices in freight or machinery packed on flat cars. Emigrants may also convey such seeds over considerable areas in the feed of their animals, and in their wagons. A moment's thought will suggest almost an infinite number of methods by which such seeds can be disseminated, and carried from one part of the country to another in a very brief space of time.

**INJURY CAUSED BY THE PLANTS.**—Like any other weeds, the thistle, when quite small, is often eaten by stock, especially sheep, but this is for so short a period in the flush of spring when grass is abundant that its value as a forage plant is not worth considering. Whenever it becomes established it excludes all other plants and draws much nourishment from the soil. In this it is like all other weeds, but it increases more rapidly, hence taking more space than others, and it seldom decays on the ground where it grows. In fields of hay and wheat it pushes up into long, straggling stems which can not blow over the country, but which ripen very early in the season.



greatly lessening the value of the crop, or sometimes entirely ruining it. The stiff, thorny weeds make it hard to run harvesting machinery, and very much annoy both horses and men. The plant thrives on high, dry soil, and will also grow on strong alkali. In fact it is difficult to mention any kind of soil unsuitable to the Russian thistle. The injury done in cultivated crops is less than in wheat fields, because the thistle is easily killed by cultivation. But the recognized presence of the thistle in California should put an end forever to the system of slovenly summer fallows which one so often sees. Unless summer-fallowed land is kept free from weeds all the season, one cannot be sure of having a clean grain plot the following year.

**STATION LITERATURE ON THE SUBJECT.**—The first official report respecting this tumble-weed thistle in America was in 1891 (Report of the Secretary of Agriculture). Therein the plant was described; early fall plowing was recommended as a check to its progress, and State legislation was suggested. A bulletin was published in 1892, and a more complete one, with maps and illustrations, appeared in 1894, portions of which have been largely republished, and plates from which appear in the present bulletin. Meanwhile other students were in the field. Professor Bessey, of the Nebraska Station, published a bulletin in 1893 on the Russian thistle in that State, and Professor Bolley published another, from the North Dakota Experiment Station. Professor Goff issued two bulletins from the Wisconsin Experiment Station. In July last year the Minnesota Experiment Station issued an extremely practical bulletin, and in September the Colorado Experiment Station at Fort Collins followed with another well-illustrated bulletin. The Ohio Experiment Station, in October, issued a bulletin on the thistle in that State, describing its entry from the West, and saying that it had obtained foothold in but one county, but was rapidly spreading to others. The Iowa State Agricultural Society, the leading newspapers of the Northwest and numbers of private individuals have been publishing articles upon the enemy, and sometime last year the Oregon Experiment Station issued a bulletin. Last winter a bill was introduced into Congress providing for an appropriation of a million dollars to destroy the thistle, and Congressman Hansbrough spoke in its favor, as noted in volume 26 of the Congressional Record, but the opinion prevailed that it was better to depend upon the townships, counties and States more directly interested.

One of the most graphic papers upon the subject is a brief memorandum by Professor Budd, of Ames, Iowa, upon the "*Russian Thistle in Its Native Home*." He quotes from Professor Henfrey's book, "*The Vegetation of Europe, Its Condition and Causes*," as follows: "On the steppes east of the Volga one curious thorny plant has attracted the attention of most travelers, the 'Wind Witch,' or 'Leap the Field.' It forms a large, globular mass of light, wiry branches interlaced together, and in autumn decays off at the roots, the upper part drying. It is then at the mercy of the autumn blasts, and thousands of them may be seen coursing over the steppes, rolling, dancing and leaping, often looking at a distance like a troop of wild horses. It is not uncommon for twenty or more to become entangled into a mass and roll away like a huge giant in seven-league boots." Professor Budd says that east of the Volga, and south of the Caspian, he met with it everywhere. In the fields of cereals it was not regarded as specially troublesome, quite contrary to American experience, because the Russian varieties of grain appear to tiller out more than with us, and are sowed very early and thickly, so that the thistle plants are said to make little progress. In this region are found vast alkali tracts which are used for pasturage, and here the thistle is found mingled with wormwoods, sages, mulleins, true desert thistles, and a multitude of other plants. West of the Volga, in the black soil section, the plant was found everywhere, but none were permitted to ripen along the railways or roadsides. The officials enforced very stringent enactments, and have so far protected the many sugar-beet fields. In southeast Orel and Kiev the sandy and the heavy clay soils are alike said to be overrun with the Russian thistle. Professor Budd thinks that it is a comparatively harmless annual as managed in most parts of Russia, but he recognizes the fact that it is a far more serious pest in the United States, where people will not accept the severe legislation of East Europe. He says: "It will spread over the unfenced pastures more rapidly than any weed yet introduced, but in fenced regions it will not in the end prove as serious a pest as the Canada thistle." The worst danger point, he thinks, will be the alkaline plains of the Northwest and West. This may be considered as a timely warning to the people of the San Joaquin and Sacramento valleys.

A brief paper by Professor Bolley, published in March of the present year in Bulletin No. 17 of the North Dakota Experiment Station, gives the results of experiments about the distribution of weed-seed by the winter winds. He says, in speaking of the thistle, that those who advocate the use of hedges or fences to stop its further encroachments have in mind only the rolling character of the weed. All weeds, if allowed to mature, are distributed to some extent by the winter winds, as nearly all are provided with special appliances, such as vanes, lint or light pods, which assist in their dissemination. Professor Bolley measured the surface of an early winter snow drift on plowed ground ten rods from any standing weeds. The snow was three inches deep. Two square feet of this drift contained thirty-two seeds, representing nine species. In another experiment he poured one peck of mixed seed upon the crusted snow when a wind was blowing at the rate of twenty miles an hour. Thirty rods distant, at right angles, a three-inch trench in the snow served to catch drifting seed. In ten minutes many seeds of all species represented were in the trench, and the lighter seeds had been carried over it. Many similar experiments were carried on, and the conclusion reached was that weed-seed of almost any size, especially the thistle, traveled for miles with drifting snow and were buried in the soil when the snow melted. If the thistle is ever disseminated in the more alpine regions of California, the same method of distribution will be dangerous here. It must also be remembered that seeds will be very easily blown long distances over the hard surface of our plains in the autumn, before the early rains cause the growth of vegetation.

**REPRESSIVE LEGISLATION ELSEWHERE.**—The weed laws of the several States are seldom well enforced, but perhaps the best laws regarding the Russian thistle are those passed by the Legislatures of the States of North and South Dakota in 1890 and 1891, and still in operation. Similar provisions if placed on the statute books of California, and carried out in every county where the thistle appears, would soon bring it under control. During the two years which must elapse before the next session of the Legislature, the only remedy in California is to be found in prompt action by county supervisors and local associations.

The South Dakota law provides that "Every person and every corporation shall destroy on all lands which he or it may occupy all weeds of the kind known as Russian thistle, Canada thistle and cocklebur at such time as the township Board of Supervisors or the Board of County Commissioners may direct." The time chosen and the method of destroying weeds is to be in such a manner as to "prevent their bearing seed." Every road

overseer is to destroy such noxious weeds on the highways, also upon adjacent unoccupied land neglected by the owners, and the cost of the latter service is to become a lien against the land.

Any land-owner or lessee of land or county or township supervisor or overseers failing to comply with the requirements of the law shall suffer various fines and penalties, said fines going to the general fund of the county in which action is brought by the State or District Attorney.

The laws of North Dakota apply to mustard, wild oats (*Avena fatua*), "French weeds" (*Thlaspi arvense*), as well as the Russian thistle, Canada thistle and cocklebur. Each Board of County Commissioners are ordered to declare the time and manner of destroying noxious weeds at their regular meetings in April each year, and their rules shall be published in the newspapers or posted as election notices are posted. In case of neglect or refusal to destroy these weeds on the part of any individual, firm or corporation owning or occupying land, it shall be the duty of the road officers, after ten days, to destroy the same, and the expense becomes a separate tax against the land, to be made a part of the next tax-roll. The neglect or refusal of any road officer to perform this work subjects him to a fine of fifty dollars.

The laws in Ohio are very complete. An act of February 17, 1884, imposes a fine of twenty dollars upon any dealer who knowingly sells impure seed, and a similar fine is imposed on "whoever, being the owner, occupier or possessor of any land," suffers weed-seed to ripen thereon or on the highway adjoining the same. Another Ohio act of April 29, 1885, gives the township trustees power to destroy noxious weeds, and the cost is collected from the owners as a tax, while the trustees receive one dollar a day for their supervision. A much more complete statute, passed April 25, 1893, requires the superintendent of roads, county supervisors and street commissioners to destroy "all brush, briars, Canada or common thistles, or other noxious weeds" within their jurisdiction, for a fortnight in each of the three months of June, August and September of each year. Any farmer who

**CALIFORNIA LEGISLATION.**—There are no laws in California which apply by name to the Russian thistle, but there are laws under which the weeds can be eradicated. The first California act aimed at any noxious weed was that of March 2, 1872, which, curiously enough, applied only to Scotch, or Canada, thistle in the counties of Humboldt, Siskiyou, Klamath, Del Norte and Alameda. The act made it unlawful for any land-owner to permit seed to ripen or to be scattered abroad, or to knowingly sell any seed or grain containing thistle seed. It imposed a fine of a hundred dollars for any violation, and the same fine upon road overseers who allowed the thistle to mature along the highways.

Section 28 of the County Government Act of March 14, 1883, also reaffirmed by the act of March 31, 1891, and again in 1893, ordains that supervisors have the power to provide for the destruction of gophers, squirrels, other wild animals, noxious weeds, and insects injurious to fruit-trees. This is the law under which work must be done at the present time wherever the thistle appears outside of incorporated towns. It is sufficient to authorize extensive and well-considered expenditures of public funds in every county of California, and it is the law under which the supervisors of Los Angeles county have felt themselves justified in spending money in the Lancaster District. The term "noxious weeds" is better in this case than the long list of names of weeds incorporated in the laws of some of the other States, because as long as this law remains in force every new weed that appears can be fought at once, instead of waiting for especial enactment.

A letter received May 2nd from Lancaster states that the Assistant District Attorney of Los Angeles doubts whether the county has a right to spend money to destroy weeds except on public roads and in parks. If this view is sustained by the courts, the result will be disastrous in many districts, but the intention of the County Government Act of 1893, which is still in force, appears very plain, and if any difficulty is going to be made, the matter should be taken to the higher court by the County Horticultural Commissioner or by any public spirited citizen. Any one who reads the law will note that reference is made in the same clause to noxious weeds and to insects injurious to orchards. Fruit trees certainly are seldom or never found in the public highway, and if the law does not limit the power of the supervisors in this respect, it is difficult to see how it can be limited in regard to noxious weeds.

Within incorporated towns, the California Act of March 11th, 1893, is in operation. This act provides for the planting and caring for shade trees in towns, and for the eradication of weeds therein. It provides that the city council or trustees of any municipality "may condemn as public nuisances any and all weeds whose seeds are of a winged or downy nature, and are spread by the winds," and they may compel the eradication of such weeds by the owners of any lot upon which they grow, or may charge the expense against said owner. This law also will be of great service although it is probable that stronger penalties should be attached, not only in the case of municipalities, but in the law defining the powers of supervisors in this regard. It is plain, however, that there need be no difficulty in finding laws under which to organize co-operative efforts to destroy the Russian thistle.

**APPEARANCE IN CALIFORNIA.**—It has been known for some time that the thistle had obtained a foothold in California, and energetic efforts have been made to destroy it. A sample of the weed was exhibited at the Fruit Growers' Convention at Sacramento last November, and excited a good deal of interest. This led to correspondence with the United States Department of Agriculture. The following letter from one of the Government botanists contains a good deal of practical information:

UNITED STATES DEPARTMENT OF AGRICULTURE,  
DIVISION OF BOTANY,  
WASHINGTON, D. C., January 25, 1895.

Prof. E. W. Hilgard, Director Agricultural Experiment Station, Berkeley, California:

DEAR SIR: During the past two weeks the Division of Botany has obtained two specimens of the Russian thistle from Lancaster, Los Angeles county, California. These specimens confirm the report previously received that this dangerous weed had been introduced at that place. It is said to be distributed over an area of about ten miles long and four or five miles wide in the desert about Lancaster, and to be most abundant about the station of Lancaster where there is water.

The nature of the surroundings are such that it can do but little harm where it is at present. Even if allowed to obtain a foothold, it might not become more troublesome than some of the worst weeds you have at present. Its behavior in the irrigated lands in Colorado and in southern Idaho indicated, however, that if allowed to spread, it will quickly take rank with your most troublesome weeds and will prove itself an evil worthy of vigorous repressive measures. In its present condition extermination seems possible and even practicable. If allowed to spread, as it is certain to do within two years if left undisturbed, extermination will be practically impossible and a continuous war for subjugation will have to be waged against it as is now the case with this plant in the Dakotas, and with ragweed, ox-eye daisy and wild carrot in the east. Statements have been made that the Russian thistle will not thrive on well watered and well tilled farms. My own observations of this plant lead me to think that it will thrive in such situations as well and even better than in dry or sterile soil, and that if once allowed a foothold on such farms, it is likely to prove as troublesome as any of our annual weeds.

Very truly yours,

L. H. DEWEY, Assistant Botanist.

(To be Continued.)



## Patrons of Husbandry.

### The Grange Field.

We are very glad to be able to announce that the projected summer Grange meeting in the Santa Cruz mountains is a sure thing. The State Executive Committee has given it an official endorsement; San Jose Grange has promised to give it support; but, better still, Highland Grange has determined to carry the thing through. Here is an illustration of the value of young blood. Highland is the "Baby Grange"—the youngest child of the Order in this State and the smallest in point of numerical strength; but it is the only Grange which has had the energy and the pluck to originate and carry out a new scheme. That it will succeed goes without saying. The plan grows every week, and it looks as if the meeting would be the most notable event of the summer.

In describing the projected site for the encampment, Mr. Adams has been so careful to stand straight that he has leaned backward. The editor of the *RURAL* made a personal inspection of the place last Saturday, and does not hesitate to pronounce it in every way better than Mr. Adams' prospectus. It is a mountain slope, facing to the northwest, and commanding a fine view of Monterey bay and the ocean beyond. It is a wilderness of oak, redwood and fir trees, dense enough for shade, and abounding in the circular groves which form so marked a feature of the redwood second growth. There is water in abundance, pure and cold. Of the views, it is idle to speak—the glory of two thousand feet elevation with vast mountain masses all about and with the ocean in full view is a thing which words are too poor to describe. The distance from the railroad—four miles—is not greater than is necessary for protection from tramps and Sunday picnickers. The way is, as Mr. Adams says, a "mountain road," but it must not be understood that it is a bad road. It is, in fact, a fine thoroughfare, all the more attractive for its variations of altitude and for its windings through forests and along mountain slopes. Nobody with an eye for the beautiful can fail to be enchanted by the ride. In our judgment, the place is an ideal one for the purposes in view.

As yet, this project for a summer meeting is the only matter astir in the Grange field. The inspection work is done; and now—again—what next? After spending so much money, it will not do to lie back idly. If the inspection work is to bear fruit, it must be followed up by something else. All this has been said before in these columns, but it cannot be said too often. A great responsibility rests upon the Executive Committee. It must determine what line of effort to pursue and then set to work to carry it into effect. If it neglects it, then all that has been spent in inspection will have been thrown away.

In a letter printed herewith, Mr. Ohleyer shows one of the means by which they keep alive Grange interest in Pennsylvania. The system is entirely practicable for California as well as for Pennsylvania, but it requires high ability in the planning and devoted industry in the execution. We suspect

that the Pennsylvania Grange has strong leadership, since such leadership is the indispensable requisite of success in Grange as in all other undertakings.

### Seasonable Observations.

TO THE EDITOR:—The picnic season is upon us, no less than three having been celebrated in the vicinity during the week. First came the colored folks' picnic of Marysville; then Yuba City Grange and their friends picnicked on Wednesday in the almond grove of George Walton, some three miles south of Yuba City. The committee of arrangements provided for a regular family gathering, for lunch and social converse. For the youthful members of society a nice platform and splendid orchestra was provided, which was patronized and enjoyed by the partakers and the spectators alike. Much might be said in commendation of these outdoor socials, but since they are a vernal and universal practice their description may well be left to the professional "Jenkins."

However, I must not neglect to mention the evening entertainment, which was also a grand success. The Grange was offered something new and got it in the shape of a "Mask Party." Each member of the Grange was authorized to extend written invitations to two non-members. Now, since the membership is large, the scheme filled the large hall to overflowing, and, judging from the universal expressions, it was the hit in the history of this Grange. The writer, I am sorry to say, was not there, all owing to having company at home which he could not shake off, although said company had been around several weeks and had been given forty-seven kinds of hints to depart. And still he lingers, though inclined to offer choice which shall go first. But I haven't got through with the picnics. The great *Appeal* picnic—the third annual of the leading paper in northern California—came off on Thursday, the 23d, and was by long odds the biggest of the three. A very large proportion of the people of Yuba and Sutter counties were there, and many from a distance were present for a good time, and they had it. This venture of the Marysville *Appeal* has become a fixed institution, and will be anticipated for years to come, and in its omission would be greatly missed. It should be added that the picnics so far this year have collected no gate money, which is a departure from former rules, unless we except those given by the *Appeal*.

The *Farmers' Friend and Grange Advocate* of Mechanicsburg, Penn., is publishing weekly a column or two of matter suitable for literary exercises in the Grange. It consists chiefly of dialogues, charades, dramas and recitations, and all are well adapted for the purposes intended. The writer has advocated such a diversion from the rigid rule for some years, and is therefore gratified to see it adopted in Pennsylvania—the most progressive Grange State in the Union.

Our membership including persons of all ages from fourteen up, their mental food should be better adjusted to their ages than has heretofore been the rule, at least such is my opinion. But the solid provender is not neglected in that good old State, as a cursory glance at the same journal reveals. In that jurisdiction programmes of meetings of subordinate and Pomona Granges are published in advance and committees are appointed to prepare the questions and name the parties who are expected to respond. Among the great variety I will quote a few questions to show their trend and as samples for emulation. Thus:

"In what line has the Grange influence secured the most good?"

"Can wheat be made a paying crop at fifty cents per bushel?"

"What is the worst thing in life?"

"Can a farmer be successful without a knowledge of the actual cost of his crops and the keeping of all kinds of stock?"

"How shall we conduct our Grange meet-

ings so as to make them of interest and profit to all members?"

"Should farmers' wives and daughters have a general knowledge of the affairs of the farm?"

"To what extent should shade trees be planted on the farm?"

"What are the real enjoyments of life and with what class of people are they mostly found?"

"Why should we organize?"

"The advantages and benefits of organization and association?"

"What are your experiences in misfortunes in farming during the past year?"

"To what extent should farmers become politicians?"

"Which is the most profitable, poultry or butter-making?"

"How can we best improve our roads with the material at hand without increasing our taxes?"

"Ought not women to have the same right of proposing marriage that men have?"

"How can we make farming more of a success at the present time?"

These are all practical questions and susceptible of being discussed by any one.

The replies are not given, probably because of their length, but the questions are discussed in speeches and essays and they reveal the trend of the mind of the Grangers of Pennsylvania.

Many, if not all, of the samples given above are applicable to California country life, and might be discussed with advantage by any rural organization as well as the Grange, none being inhibited.

A short time ago I was reading a communication in a paper, the name of which has slipped my memory, all about a "Raisin Ranch," which raised my ire. The vineyard was all right, but the name given it is horrid. Webster tells us that a ranch is a place where stock is kept. To my mind it is a relic of the Vaccarium where the Mexican vaquero hold sway for centuries—a place where all manner of stock was kept, herded by Spanish buckaros on bucking mustangs, altogether as much unlike a modern or ancient raisin vineyard as is a ladies' parlor to a tan-yard. The nearest we come to maintaining a "ranche," I think, is a 10,000-acre wheat farm operated by nomads and mules, no family or schoolhouse on the tract and the owner residing in the city. But to call our orchards, vineyards and well-tilled small farms ranches is most ridiculous. True, we gather many musical and appropriate expressions from our predecessors of California, but it strikes me that we should not adopt terms less exalting than are to be found in our own language and custom. Let us at least draw the line at fruit culture.

What a mass of useful information could be gathered from replies to the question quoted above, namely, "What are your experiences in misfortunes in farming during the past year?" The question is singularly framed, as it evidently means to call out experiences of success as well as failures. In this manner the replies would contain very useful hints to experienced farmers as well as the novice and would furnish a guide against future errors.

Who will reply to the above and to this other question: "What are the real enjoyments of life and with what class of people are they mostly found?"

GEORGE OHLEYER.

Yuba City, May 27, 1895.

### The Farmers to Meet.

TO THE EDITOR:—It is said in the Good Book that "the last shall be first and the first shall be last." A fine illustration of the above is being demonstrated by Highland Grange—the youngest in the Grange sisterhood—which has inaugurated a plan and, in fact, is now already at work in preparing the grounds for the summer encampment of farmers. Too much credit cannot be awarded to Highland Grange for its pluck and perseverance in pushing this project to a successful conclusion.

The question of having a summer encampment was for many years mooted in the State Grange. Coming as the members did from all parts of the State, no definite conclusion could be

arrived at as to where it should be located, as different localities presented various attractions, hence nothing was done, and now the quotation is being exemplified that the "last shall be first." Bro. E. F. Adams of Highland Grange assures us that the work on the new grounds will be pushed with all the means at the command of his Grange. He also states that his Grange has interested many farmers in the immediate vicinity, and they, with their teams and shovels in eradicating the underbrush, will aid largely in pushing the work along.

The proposed camp grounds are about seventeen miles west of San Jose in the Santa Cruz mountains, at an altitude of about 2000 feet. To reach the grounds, if by rail, go to Wrights, six or seven miles west of Los Gatos, on the narrow-gauge railroad, thence by conveyance four miles; or, if parties go by their own teams, they will find a well-traveled road, and, after their camp equipage, etc., is disposed of, if they so desire, they can take their teams to some of the many pastures in the foothills or valleys. That the proposed encampment will be a success there can be no reasonable doubt.

In all probability, when the grounds are in readiness, they will be formally dedicated, when the Worthy Master of the State Grange—Bro. Roache—should be invited to give the dedicatory address. The Worthy Overseer—Bro. Greer—should be invited to respond to an address of welcome.

The literary exercises will undoubtedly be given to Bro. C. W. Childs, principal of the Normal School. Invite Prof. Hilgard, the tried and true friend of the farmer, and President Jordan of the Stanford University, who has always shown a willingness to aid in the prosperity of the State, to take part in the dedicatory services.

It has been said that the pen is mightier than the sword. Let it be demonstrated on that occasion that the plow is greater than both, and for that purpose invite Bros. Holman of the *RURAL PRESS* and Carrington of the *Saturday Press* to be present, surcharged with speeches to demonstrate the above proposition, and for the good of the Order generally. With this programme, or a better one, an attendance of at least 500 could be expected; and if the "good time coming," of which we are told, does not put in an appearance at that time, it will not be the fault of Highland Grange, which is doing so nobly.

AMOS ADAMS.

San Jose, May 27, 1895.

### From Tulare.

Tulare Grange held its regular meeting on Saturday, the 18th. Worthy Master Shoemaker, having completed his work of inspection in District No. 3, was present and presided.

Bros. Zumwalt and Shoemaker, having attended a called meeting of farmers and farm hands on the 11th to agree upon a scale of wages to be paid during the coming harvest, made verbal reports. A good attendance was had at the meeting and a desultory discussion of the subject was had without coming to any definite agreement as to what wages should be paid, no programme or resolutions being before the meeting for action, the general expression of opinion, however, being that with board, one dollar a day for haying and one dollar and a half a day for harvesting is all the present prices for farm produce will justify. It was not intended that laborers skilled in handling and management of teams or agricultural machinery should be paid according to these rates; in such cases the employer is left to his own discretion and knowledge of the man's worth as to the rate of wages he will pay. That there is a want of more definite understanding as to amount of wages between farmers and farm hands, goes without saying, and had the meeting been held under the management of some well-regulated organization like the Grange,

(Continued on page 350.)



## THE HOME CIRCLE.

### When the Good Times Come.

The world will be all brighter  
When the good times come,  
And the hearts will all be lighter.  
When the good times come!  
The birds will all be singing  
The sweetest roses springing  
The bells will all be ringing  
When the good times come!

In love and peace we'll mingle  
When the good times come;  
You'll hear the silver jingle  
When the good times come.  
And sorrow'll seek us never,  
And friends no more shall sever.  
But we'll sing and shout forever  
When the good times come!

—Atlanta Constitution.

### The Weary Wooden Soldier.

My wooden head is cracked across,  
I've lost my youthful charms;  
I've lost, alas, one wooden leg,  
And both my wooden arms.

Full many a fight have I been in  
'Twixt Fred and brother Hugh;  
I've been officer and private  
(I've been ammunition, too).

I've been used to poke the fire with;  
I've been dipped into the ink;  
And I've made a perilous journey  
Adown the kitchen sink.

I've been drowned, and I've been married,  
I've been buried and dug up,  
I've been "worried" round the garden  
By that seven-months-old pup.

In short, this mortal life is such  
That, though I'm truly brave,  
I long with all my wooden heart  
For just a quiet grave.

Theo. Bernard.

### The Blessed Burglars.

"My first burglary," remarked Uncle Bobs suddenly, as Dicky and he sat on the piazza together, "was committed when I was a boy of twelve."

"What! You committed a burglary—you Uncle Bobs?" cried Dickey, in dismay. "Oh, that was an awful thing to do."

"Not such a very awful thing the way we did it," said Uncle Bobs, calmly. "Listen and I'll tell you all about it."

"Teddy Gordon, my school chum, was the swiftest runner in Pokesville. One Fourth of July he captured no less than \$50 in prizes. Next morning I met him coming down the road."

"Hello, Teddy," said I, "decided what to do with your money yet?"

"Yes," he replied, "I'm going into the burglar business."

"Ted Gordon, have you clean gone out your senses? What on earth do you mean?"

"Exactly what I say," replied Ted, calmly. "I've got my eye on an easy house to begin on, and look here, Bob, I'm going to take you into partnership."

"Well, not if I know it," said I, my eyes opening wide with amazement at Ted's coolness. "In the first place it's dead wrong, and in the second it's very dangerous."

"Oh, I guess you'll join in this enterprise all right," responded Ted, with a smile. "Now, listen."

"Looking cautiously about to see that there was no chance of being overheard, Ted unfolded his plan."

"Why, it's a splendid scheme!" I broke out, presently. "Of course I'll join you. And look here, Ted, the old lady hasn't got any bulldog or anything, and I don't believe she even locks her doors nights. Come along now, and let us get together our things."

"And arm in arm we strolled down the street, maturing our plans as we went."

"Miss Judith Brown or 'Aunt Judy' as she was often called, lived in a somewhat dilapidated little cottage about half a mile down the road. The poor old lady had recently fallen upon evil times. The \$100 income with which she had for years managed to keep body and soul together was suddenly cut down to one-half that amount. And to make matters yet worse her eyes began to fail her, so that she could no longer add to her small income by her sewing and fancy work. So altogether matters were looking about

as black and gloomy as they well could. "The carpet in her sitting room was very threadbare, the chairs old and rickety, and as for the table, it could scarcely support the few cracked dishes her frugal meal required her to put upon it."

"Occasionally Aunt Judy had a lady visitor, and then with what mortification the poor woman was compelled to set before her caller chipped cups and saucers and to warn her not to bear too heavily on the chair upon which she was sitting, only a few of acquaintances knew."

"Tilly," she said one evening to the little girl she kept more for company than anything else, "Tilly, to-morrow when you go down to the grocer's, see if he won't give you another soap box. We must save the chairs for our callers."

"This evening after the Fourth she was feeling very down-hearted, indeed. It looked as though she would have to openly appeal to charity, and this she had never been driven to before. It was so hard to do it, so hard."

"A little after eight she and Tilly retired to their chamber up under the eaves, and soon they were fast asleep."

About ten o'clock, when all was dark and still, a wagon drove up, and turning out from the road stopped on the other side of Aunt Judy's back yard fence. Here it lay completely hidden both from the house and from the street."

Three minutes later Ted and I poked out our heads above the boards, and seeing that no one had been disturbed we climbed lightly over and crept up to the back door. As we expected, it was only on the latch, for if there was anything that Aunt Judy had no occasion to fear it was the midnight thief."

"Once inside the house we drew down the blinds and lighted our bull-eye lantern. The old cat looked up at us in surprise from the kitchen hearth, and then, evidently considering the idea of burglars too absurd to entertain for a moment, again dropped off to sleep."

"In the kitchen we quietly removed our shoes in true burglar fashion and crept forward. The scene of our operations was the sitting room."

"Hist!" whispered Ted, gently, now. "If we are discovered, we are found." The situation lent the chestnut a fresh pungency. And it was as much as we could do to keep from bursting into a roar of laughter. We got our risibilities under control, however, and set to work."

"Gathering up as many chairs as we could bear off without noise we carried them to the back door. After that we took the table, and then with much difficulty we lugged the old sofa. Next we took a couple of armfuls each odds and ends, and finally plucking up the threadbare carpet by the roots we bore it off, chuckling to ourselves for we had completely denuded the room."

"Putting on our boots we now carried our booty out to the wagon and then—well, half an hour later Ted and I were along the road on our way back."

"Ha! ha! ha!" I roared as soon as we were out of earshot, "that's the greatest lark out. Oh, but won't the old lady be surprised though?"

"Ted was more serious. He evidently felt his responsibility as originator and backer of the affair. 'I say, Bob,' he whispered, 'what do you suppose they'll say if we're found out?'"

"The only reply I could make was another scream of laughter."

"When Tilly came down in the morning to light the fire her eyes almost popped out of her head with amazement. As soon as she recovered herself, she rushed upstairs. On reaching the first flight, however, she paused as an idea entered her mind, and stood leaning against the bannister. Then with a broad grin, for her decision seemed to amuse her greatly, she ran up and burst into Aunt Judy's room."

"Oh, missie! missie!" she cried, "it's all gone, missie. The robbers have taken all your furniture. It's all gone, missie, even to the carpet and spoons and everything!"

"Poor Aunt Judy was a sight to be-

hold. In trembling haste she threw on her wrapper and hurried downstairs."

"Pushing open the parlor door the excited old lady received a shock which well nigh too her off her feet. There before her was a brand new set of furniture, chairs, sofa and table, and the latter spread with a nice white tablecloth and with bright new knives and forks and spoons, and pretty cups and saucers upon it, the like of which she had never expected to see in her little home again. In the center of the room was a nice, large rug, and stuck up in the corner was a roll of handsome carpeting sufficient to cover the border of the floor that was yet exposed."

"With a quick glance the astounded woman took it all in, and then she dropped on her knees and sobbed aloud. For some minutes she remained thus, her head buried in her hands, and then, rising, her face greatly brightened, she said simply: 'Make some tea, Tilly; we must christen our new tea pot.'"

"As Tilly lifted the cover of that article something green flashed to her eye from the inside. She shook it out. 'Oh, look, missie!' she cried, 'look here. Money! See! Ten, ten and five—\$25. Oh, missie, this is just great. The Lord is good, isn't He?'"

"Yes, child," replied Aunt Judy, and then the old pride coming suddenly upon her, she said, 'But we'll have to find out who did it and send them back. We mustn't keep them, Tilly. It's too much like charity.'"

"A little latter when the minister was going by she called him to advise her. No matter what his arguments were, he had well-nigh persuaded her to accept the gift without question, when Tilly clinched matters."

"Sides, missie," she said, offering her speech as a supplement to the minister's, 'the burglars got your furniture, hain't they. Time enough to give up the new things when they bring back the old ones.'"

"I will keep them," said Aunt Judy, smiling, and so the thing was settled."

"Yes, the newspapers got hold of the affair, and pretty soon Teddy and I were known about town as 'The Blessed Burglars.' But before this happened the minister at Aunt Judy's request had inserted this little item:

"REWARD OFFERED.—Any person giving information concerning the burglars who entered the premises of Miss Judith Brown on the night of July 5th will receive a thousand thanks. As for the burglars themselves, Miss Brown would be greatly pleased to have them call upon her some evening while she is awake to receive the gratitude their kindness and consideration deserves."—Omaha Bee.

### Is Blushing a Virtue?

Some time ago a well-known New York clubman took it upon himself to assert that the modern woman has forgotten how to blush. This imputation was launched at femininity in general with such bitterness and asperity that one might gather therefrom that blushing is a virtue, and that not to blush is faculative and criminal. Whatever the connection between this sudden heightening of color and innocence in the case of women, however, it seems a little strange that the blush should be considered a sign of grace by men. Cynics have always maintained that women cry about anything, and at a moment's notice, and it is indeed pretty well known that many actresses can squeeze out real tears nightly at the proper moment; but blushing is more difficult to acquire as art, and it seems unjust that a woman should be supposed to be utterly brazen because she does not turn crimson on the slightest provocation."

Blushes, nevertheless, are evidently considered all important by the generality of men. For instance, to call a man an "unblushing scoundrel" is a distinct slur on his character, and to tell another that you blush for him, used at one time to be a pretty common form of insult. Even now the phrase "we blush to relate" is to be found in

our daily newspapers. The poet Young lays it down in his "Night Thoughts" that "the man who blushes is not quite a brute," but this is open to doubt."

It is true, however, that Darwin's observations determined the fact that blushing is confined to human species, though dogs certainly grin when happy and monkeys redden in the face when angry."

### Fashion Notes.

The distinctive feature of the season's fashions, aside from the elaborated sleeves and wide, plain skirts, is the craze for lace and all sorts and kinds of showy ornamentation in jetted and spangled trimmings of brilliant colorings, and Persian bands of numerous soft, subdued tints woven together with charming effect. Added to these is the universal use of white and cream tints on dark as well as light dresses."

White in some form has become almost a necessity to the success of a gown from a fashionable point of view, and whether the wide berth collar of muslin and lace are becoming or not, you must have them. White silk and satin are generously used for facings, linings, revers and collars on dark blue and black cloth gowns, and almost every gown has a touch of white somewhere."

Any attempt at a full description of the chemisettes and blouse fronts made of batiste and trimmed with lace is futile, for there is no end to the variety. There are rows of fine tucks alternated with narrow insertion and edged with lace insertion set in diagonally, lengthwise, and straight across without tucks or edging, and inch-wide horizontal tucks with insertion between and edge gathered in each tuck."

A new pattern for a jacket, which is even better than a reefer for seaside wear, is called a "blouse jacket," has a straight front and back, and is made in panels, which are braided to the shoulders. The two fronts form one panel, the sides two other panels, and the back another. The sleeves are full above and made with a long, flaring cuff that extends half over the wrist."

The suspending effect is being revived for summer frocks, and is greatly smartened by the addition of lace tabs being turned over the straps on the shoulders. They make particularly pretty frocks for young girls."

Colored duck and pique frocks made with immensely wide white sailor collars and round "middy" jackets are to be worn a good deal for yachting. These have gilt navy buttons."

Linen canvas in solid tones, sage brown-cardinal and art green, is another and newer trimming for little girls' gingham frocks."

A cool-looking lawn has black polka dots embroidered on a white ground, and is divided into squares by threads of pale yellow silk. Many of the lawns have cords running through them of cotton or silk, in the same or a different color. There are lovely crepes, some with the popular Oriental or Japanese designs printed on them. These make charming gowns when softened by a profusion of yellow lace."

### Awarded

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Gold Medal, Midwinter Fair.

### DR.

**PRICE'S**  
CREAM  
**BAKING**  
**POWDER**

Most Perfect Made.  
40 Years the Standard.



## Presidents Who Were Farmers.

In those halcyon days of agriculture ten presidents of the United States were called from farms.

1. Washington, the land surveyor and farmer, from Mount Vernon.

2. John Adams, of Quincy, who, during the last year of his presidency, said: "I am weary, worn and disgusted to death. I had rather chop wood, dig ditches and make fences upon my poor little farm. Alas! poor farm and poorer family, what have you lost that your country might be free!"

3. Jefferson, farmer, philosopher and statesman, from Monticello.

4. Madison, farmer and lawyer, of Montpelier, Va.

5. Monroe, farmer, from Oak Hill, Virginia.

6. John Quincy Adams, from the Quincy farm of 100 acres, near Boston. (It is said that most of the trees were raised by John Quincy Adams from the seeds which he was in the habit of picking up in his wanderings. The most peculiar interest attaches to a shellbark hickory which he planted more than fifty years previous to his death. In this tree he took a peculiar satisfaction, but he was an enthusiast in regard to all the trees of the forest, differing in this respect from his father, who was an agriculturist of the Cato stamp—was more inclined to lay the axe to them than to propagate them.)

7. Andrew Jackson, of the "Hermitage," in Tennessee, who, as a farmer, soldier and lawyer, was a most excellent type of the best Americanism.

8. Van Buren, of Kinderhook, N. Y., was called to the presidency from his sheep and wool farm, although he was a lawyer of far above average acquirements and ability.

9. William Henry Harrison, from his farm at North Bend, O.

10. Tyler, of Sherwood Forest farm, Virginia, where he subsequently died.

11. James K. Polk, of Duck River, Tenn., also came from the farm to the presidency.

This selection of presidents from rural homes—from among the farms of the country—illustrates the fact that in those days there was no profession or calling which held a more exalted position in public estimation than that of agriculture.—Secretary J. Sterling Morton, in the Forum.

## Curious Facts.

The trigger pull of sporting guns is three pounds on the right-hand barrel and three and one-half pounds on the left-hand barrel. The latter is made the heavier pull for the reason that the shock of explosion would otherwise set off both barrels at once.

A medical journal says that in the continued use of the eyes in such work as sewing, typesetting, book-keeping, reading and studying, the saving point is looking up at short intervals and looking around the room. This practiced every ten or fifteen minutes relieves the muscular tension, rests the eyes and makes the blood supply much better.

Engine No. 225 of the Pennsylvania's new class P., with seventy-eight-inch wheels, did some fine running a few days ago, having reached the speed of ninety miles per hour and averaged over eighty-seven miles per hour for several miles. It also ran 65.2 miles (including six slow-ups) in 62.75 minutes, and from a standstill at Bay View it ran to Chases, 11.4 miles, in nine minutes and thirty-nine seconds.

Highly important and significant are the figures just issued, with comparisons, showing the wealth of England in spite of twenty lean years of depression. The taxable property of England and Wales in 1894 was £161,000,000, compared to £104,000,000 in 1870. This increase of more than fifty per cent has taken place when the taxable value of land has decreased within fifteen years from about £40,000,000 to £33,000,000. The land formed in 1870 about one-half the taxable property of the country. It is now little more than one-fifth.

## Humorous.

First Householder—How is it McCabe beats your carpets so thoroughly? He never gets half the dust out of mine.

Second Householder—Why, I always tell him they're English carpets, and he pounds them until I take them away from him.—Truth.

Vanderchump—You heard him call me a donkey, didn't you?

Dusenberry—Certainly.

"You will go on the witness stand and swear to it, won't you?"

"Of course, with the greatest of pleasure in the world."—Texas Siftings.

Little Ethel (horrified)—We've invited too many children to our tea party. There isn't enough for them to get more'n a bite each.

Little Dot (resignedly)—That's too bad. We'll have to call it a reception.—Good News.

Mrs. Crossly—How provoking! The steam pipes are all broken and the janitor says it will take a month to get them repaired.

Mr. Crossly—Don't worry. Between your temper and your brick-tinted hair I don't think we shall freeze.—Truth.

"What perfect sympathy there is between Mrs. Plainface and her daughter."

"I should think so! How could she help sympathizing with a daughter who looked like her."—Life.

"I never borrow trouble," said Bilton.

"Well," replied the man who had once lent him money, "there's never any telling how bad a man's credit will get to be."—Washington Star.

She (tenderly)—"Sometimes I wonder why you love me."

He (assentingly)—"So do I."

She (indignantly)—"Sir!"

He (explanatorily)—"I mean why you love me."—Life.

Prospective Tenant (to agent)—"You say this house is just a stone's throw from the depot."

"Well, all I have to say is I have a great admiration for the man who threw the stone."—Life.

Customer (in hardware store)—"Do you sell the Golden Rule?"

Clerk—"We don't even keep it."—Philadelphia Record.

A.—Did you read of that fellow who was arrested in Chicago lately?

B.—No. What had he done?

"Why, the scoundrel had wives in no less than ten different cities."

"All I have to say is that I am surprised at the in-ten-city of the fellow's affections."—Tammany Times.

## Gems of Thought.

Common-sense religion is not a spasmodic affair; it is steady, prayerful and cheerful observance of God's commands. It teaches that character is an achievement, not a gift.—John W. Chadwick.

Simplicity is the character of the spring of life, costliness becomes its autumn, but a neatness and purity, like that of the snowdrop or lily of the valley, is the peculiar fascination of beauty, to which it lends enchantment, and gives a charm even to a plain person, being to the body what amiability is to the mind. \* \* \* In character, in style, in all things the supreme excellence is simplicity.—Longfellow.

Great severities do often work an effect quite contrary to that which was intended; and many times those who were bred up in a very severe school hate learning ever after for the sake of the cruelty that was used to force it upon them. So likewise an endeavor to bring children to piety and goodness by unreasonable strictness and rigor does often beget in them a lasting disgust and prejudice against religion, and teacheth them to hate virtue at the same time that they teach them to know it.—Tillotson.

## DOMESTIC ECONOMY.

## Hints to Housekeepers.

Ammonia bleaches yellowed flannels. Kerosene in starch prevents its sticking.

Vinegar and salt will strengthen a lame back.

Add a tablespoonful of powdered borax to the bath, as it will soften the water and prove very invigorating.

Teach children never to swallow the seeds of grapes, oranges, apples, pears or raisins. Fatal illness sometimes occurs from neglect of this care.

Silken fabrics should never be folded in white paper. The chloride of lime which is used to bleach the paper causes a chemical change in the silk, and injures the color.

One can make excellent glue by covering pieces of glue (as it comes in the dry state) with vinegar; keep in a warm place and shake occasionally until dissolved. For mucilage, thin it with more vinegar.

Cornmeal is one of the best cosmetics known. Keep a jar on the washstand and rub a handful well into the skin after washing with warm water; wash it off, dust out your eyebrows, and then see how satiny your face feels.

A simple way to remove grease spots from wall paper, caused by the head resting against the wall, is to hold a piece of clean blotting paper over the spot and press a moderately warm flat iron over it. Repeat the operation until all the grease is out.

In these house-cleaning days it is well to remind the mistress of that important ceremony of the efficacy of strong alum water as a vermin destroyer. Closets should be brushed with this solution in every crevice, and wooden bedsteads and loose wainscoting in old houses, which sometimes prove troublesome, may be similarly treated.

It is the practice in many public schools to collect, at the end of each day's session in writing or drawing, the lead pencils, pen holders and pens that have been used. The next day and the day after they are again distributed, indiscriminately, without any cleansing. Physicians urge that these pencils and pens be made the individual property of the pupil, as a precaution against the spread of contagious diseases, and that slates and sponges be altogether done away with. Parents who cover their children's school-books to keep them clean are advised to use only stiff-glazed brown paper, which can frequently be removed for a fresh covering instead of "textile" fabrics of cloth or muslin.

## Washing Blankets.

A sunny, windy day should be selected, and only one pair washed in one day. First put the blankets on the line and shake the dust out of them. Cut one pound of good soap in small pieces and boil in two quarts of water till dissolved. Add a half pound of powdered borax. Fill a tub about half full of water and add the soap and borax. Be sure to have the temperature of the water the same as that of the outside air. This is not a difficult matter, as water is usually a little colder than the air in spring and summer, and only then should blankets be washed. Press the blankets down into the water and avoid rubbing; then let the soap and borax do the work—they certainly will. Let the blankets soak for two hours, and rinse them thoroughly in several waters until the rins-

ing water looks clear, taking care to have the rinsing water the same temperature as the first water and the outside air.

Then, without wringing, put the blankets on the line. Do not stretch them, and be careful to hang them exactly even, then the color of the stripes will not run into the white. Although dripping wet, on a clear day they will dry in four or five hours and will be soft and clear. The water, not the washing, will show to a certain extent, although they will look more like new ones than they did before washing. Take in when perfectly dry. They should not be ironed nor pressed. They will be clean and will smell sweet. The only hard work is to get the blankets on the line properly, and if some one will "lend a hand," even this is not very laborious.—Good Housekeeping.

## Domestic Hints.

FISH SAUCE.—Take one-quarter of a pint each of milk and cream, two eggs well beaten, salt, a dash of cayenne and the juice of half a lemon. Put it over the fire and stir constantly until it begins to thicken. Serve with boiled fish.

CRANBERRY TARTS.—Stew the cranberries in a very little water until they are well done. Rub them through a sieve. Season them with plenty of sugar while hot; add a little spice, if the taste is liked, and let it get quite cool. Line small plates with puff paste, and put on a rim of the same; fill the plates, and bake until the crust is done.

CARROTS (AN ENTREE).—A delicate entree is made by grating ten small table carrots and putting them in a saucepan, with three ounces of butter. Let them simmer gently fifteen minutes, then add salt, pepper, a very small onion chopped fine, and a teaspoonful of chopped parsley. When the carrots are tender drain the butter from them and serve hot. This is a nice dish to serve with roast beef.

FRICASSEED CHICKEN.—Cut two chickens, weighing about two and one-half pounds each, into neat pieces. Put two teaspoonfuls of salt, a third of a teaspoonful of cayenne pepper, half a teaspoonful of mace, one-third of a nutmeg grated, on a plate and mix them thoroughly. Now sprinkle each piece of the chicken with this mixture and place them in a saucepan skin side down. Barely cover them with cold water. Grate one onion over them and simmer until tender. Take off any scum that rises. When done take out the chicken, piece by piece, with a fork and arrange neatly on a hot platter, and put where it will keep hot while the gravy is being made. There should be nearly a pint of it in the kettle. Rub one and one-half ounces of flour and two ounces of butter to a smooth paste; add a few drops of gravy to soften it. When perfectly smooth stir it into the gravy and let it boil two or three minutes, stirring constantly; then pour in two gills of cream. As soon as the gravy boils up again, pour it over the well-beaten yolks of four eggs. Return instantly to the kettle, let it get thoroughly hot without boiling and pour at once over the hot chicken, and serve immediately. The eggs should never be added to the gravy until the rest of the dinner is being put on the table; the gravy should be made with great care, to prevent curdling. If preferred, a tablespoonful or a little less of onion juice, instead of the grated onion, can be used. To obtain the juice, take a good-sized onion, peel and halve it, and squeeze it in an ordinary lemon squeezer, as you would a lemon.

Highest of all in Leavening Power.—Latest U. S. Gov't Report

**Royal Baking Powder**  
ABSOLUTELY PURE



## Government Telegraph Service.

Patrick B. Delaney, a veteran telegrapher, thinks that the government could do the work now covered by the postal service, vastly better by means of the telegraph. Of course radical changes will have to take place. Mr. Delaney shows that at present it costs the telegraph companies three cents to bring a message from a customer to the office and another three cents to deliver it. As this rate is based on an average of twenty words per minute with hand transmission, and sixty words per minute with the quadruplex working, it is easy to understand that the companies cannot telegraph for less than existing rates. But hand working and great numbers of cheap wires will soon be things of the past. Automatic systems and a few big copper wires reaching out to the principal cities will have a vastly increased capacity, and will before long be employed to carry quantities of correspondence which at present we do not dream of. Mr. Delaney says: "Why should the government insist on carrying our letters by train at thirty miles an hour instead of by telegraph? Why waste twenty-four hours in covering the distance between New York and Chicago? There are about 30,000 letters exchanged between New York and Chicago daily. Assuming that they average fifty words each, all could be telegraphed over two copper wires the size of a lead pencil, and with time to spare." It has been demonstrated that with the automatic chemical method, 1000 words per minute can be recorded perfectly between New York and Chicago over a one ohm per mile wire. Messages can be perforated at the rate of twenty-five words per minute and typewriters can print from the received tape at the same speed. On this basis, letters of fifty words could be perforated, transmitted, printed and delivered through the mails at a cost of about five cents. This is what Mr. Delaney says we are coming to, if the government will only take hold of the work. It will be curious and interesting to watch the bearing of the enormous development of telephony which is close at hand, and to see what part it will play in the cheapening of telegrams, whether the government acquires control of the telegraph service of the country or not.

MODERN INDUSTRY has a foothold in the Arctic regions. Mines are worked on a large scale and a railroad regularly operated in such high latitudes. This is the case in Sweden, where the Lulea-Gellivare Railroad, built for the purpose of carrying iron ore from the Gellivare mines to the seaport of Lulea, extends fifty miles above the Arctic circle and enjoys the distinction of being the first railroad to open up the frigid zone.

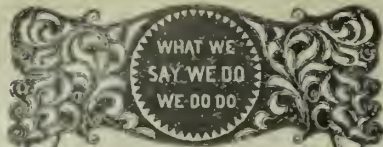
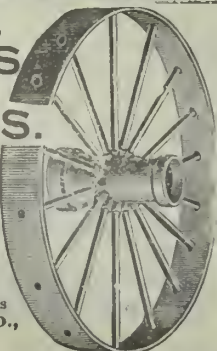
## Horse Owners! Try GOMBAULT'S Caustic Balsam



A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland O.

## METAL WHEELS for your WAGONS.

Any size you want, 20 to 60 in high. Tires 1 to 4 in wide—hubs to fit any axle. Saves cost many times in a season to have set of low wheels to fit your wagon for hauling grain, fodder, manure, bags, &c. No resetting of tires. Call for free. Address EMPIRE MFG. CO., Quincy, Ill.



Is experience worth anything in farming? Suppose you decide to move to town and rent the farm "on shares."

You have a chance to rent to a man who has been a storekeeper; to another who has been a stock buyer; to one who has been farming for five years, and to another who has been farming for twenty years. Other things being equal the "twenty year" man would get your farm. Greater experience—that's the reason.

## McGORMICK

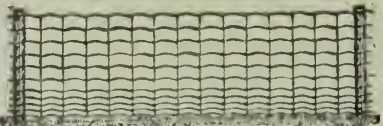
is the name of the inventor of the first successful reaping machine.

Since 1831 that name has been identified with whatever is best in grain and grass harvesters.

The makers of the McCormick have neither been "keeping store" nor "buying cattle"—perfectly honorable lines of business but not the McCormick line. For sixty-four years they've simply been building McCormick light-running steel binders, reapers and mowers. That's greater experience than anybody else has had in this line.

That's one of the reasons why McCormick machines lead the world.

There are others; apply to the nearest McCormick agency for particulars.



## A Man Can Live Without Air

Almost as easily as a wire fence can without ELASTICITY. If the man was confined in an air tight room, he would linger along for awhile, just as a fence does, supported by the trifling amount of elasticity in soft wire. Then a stimulant applied with a wrench to the end ratchets enables it to give a few more gasps before the final collapse. Our COILED STEEL WIRE is armed so strong with ELASTICITY, its life is one continual SPRING, and to its owner "December's as pleasant as May".

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

## Price's Traction Engine.



We have one of these engines that was used about one month last season and was taken back by us by reason of illness of purchaser. Engine is in perfect order, and in better working order than when first sent from the factory. A BARGAIN. Indicated power, 8-horse; Cylinders, 8x8; Wheels, 4 ft. high, 28 in. wide; weight, less than 10 tons. Price when new, \$4500.

HOOKER & CO.,

16 and 18 Drumm Street, San Francisco.

## "INDURINE" COLD WATER PAINTS.

A Most Remarkable Material is the OUTSIDE INDURINE. It stands rain and exposure as well as oil paint, and costs only a fraction as much.

It is just the thing for fences, outbuildings, factories, etc., being cheap, durable and easily applied by anyone.

It has no equal as a light reflector for light-shafts and court-yards of large buildings. It is supplied in a thick paste, to be diluted with cold water. It is made in white and several colors.

INSIDE INDURINE Is designed especially for factories, stables, and general inside work, as a substitute for whitewash, kalsomine or oil paint.

It will not rub or scale, soften or darken with age, and works well over old whitewash. A dry powder to be mixed with cold water.

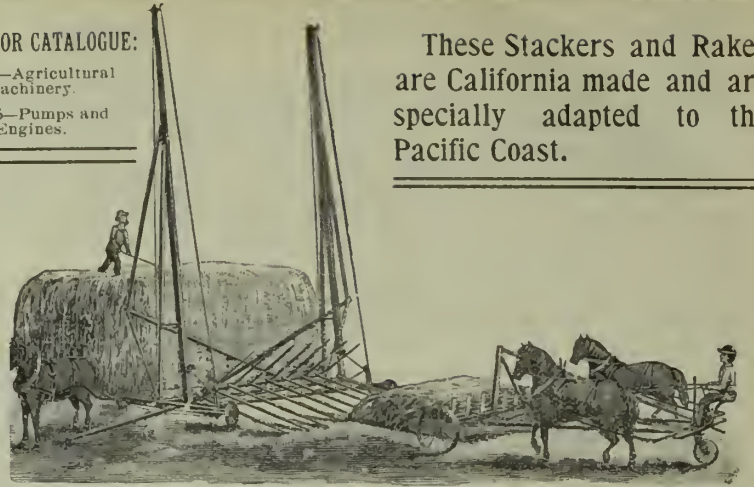
Both Indurines are perfectly fire-proof. Send for circular and prices to

WM. BURD, MANUFACTURER, Mills Building, San Francisco, Cal.

## WRITE FOR CATALOGUE:

No. 14—Agricultural Machinery.

No. 15—Pumps and Engines.



These Stackers and Rakes are California made and are specially adapted to the Pacific Coast.

## Jackson's Improved "Eclipse" Stacker and "Acme" Rake.

NOTICE.—We have discontinued our Sole Agency for the "Eclipse" Stacker and "Acme" Rake, heretofore controlled by the Deere Implement Company, of San Francisco; and they will no longer represent us.

Henceforth we will supply these Stackers and Rakes direct to the trade. We carry a large stock on hand; and all orders will receive prompt attention. Send your orders direct to us, or through your local dealer.

WARNING.—These Stackers and Rakes are fully protected by Letters Patent. BEWARE of infringements, and inferior, imported machines.

## Byron Jackson Machine Works,

625 SIXTH STREET, SAN FRANCISCO, CAL.



WAUKEGAN CHIEF.

## WAUKEGAN BARBED WIRE.

Weight per Rod,  
Not Price per Pound,  
Makes the Cheap Fence.

100 Rods of Waukegan  
Weigh only 90 Pounds.

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## Randolph Steel Frame Headers

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We offer these for sale at HARD-TIME PRICES.

THEY ARE THE BEST HEADERS IN THE WORLD. EVERY ONE GUARANTEED.

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For Irrigation, Hydraulic Mining, Mills and Power Plants.

IRON, CUT, PUNCHED AND FORMED, AND TOOLS SUPPLIED FOR MAKING PIPE ON THE GROUND WHERE REQUIRED.

309 to 317 Market Street, San Francisco.



## S. F. MARKET REPORT.

## Market Review.

SAN FRANCISCO, May 28, 1895.

**FLOUR**—We quote: Net cash prices for Family Extras, \$3 40@3 50 ¢ bbl; Bakers' Extras, \$3 30@3 40; Superfine, \$2 25@2 50 ¢ bbl.

**WHEAT**—No. 1 Shipping Wheat is quotable at 90¢ per cwt, with 91½¢ for choice. Milling Wheat keeps steady at 97½¢@1 ¢ per cwt.

**BARLEY**—Feed, fair to good, 62½¢@63½¢; choice, 65¢@66½¢; Brewing, nominal.

**OATS**—We quote: Milling, \$1 07½¢@1 17½¢; Surprise, \$1 10¢@1 20¢; fancy feed, \$1 02½¢@1 07½¢; good to choice, 95¢@1 ¢; fair to good, 90¢@95¢; poor to fair, 87½¢@90¢; Black, nominal; Gray, 95¢@1 02½¢ ¢ cwt.

**CORN**—We quote: Large Yellow, \$1 10¢@1 12½¢; small Yellow, \$1 12½¢@1 17½¢ ¢ cwt; White, \$1 05¢@1 12½¢.

**RYE**—Quotable at 87½¢@90¢ ¢ cwt.

**BUCKWHEAT**—Quotable at 90¢@1 ¢ ¢ cwt.

**OILCAKE MEAL**—Quotable at \$25 ¢ ton from the mill.

**COTTONSEED OILCAKE**—Quotable at \$24 ¢ ton.

**MIDDINGS**—Quotable at \$18@19 ¢ ton.

**BRAN**—Quotable at \$14@15 ¢ ton.

**GROUND BARLEY**—Quotable at \$14 50@15 50 ¢ ton.

**HAY**—New Wild Oat selling at \$6@6 50 ¢ ton. We quote as follows, old: Wheat, \$7@11; Hay and Oat, \$7@10 50; Oat, \$7 50@10; Alfalfa, \$7@8 50; Barley, \$7@8 50; Clover, \$7@8; Compressed, \$7@9 50; Stock, \$8@7 ¢ ton.

**STRAW**—Quotable at 50¢@75¢ ¢ bale.

**FEED**—Manhattan Horse Food (Red Ball Brand) in 100-lb cabinets, \$8; Manhattan Egg Food, 100-lb bags, \$11 50.

**BEANS**—We quote as follows: Bayos, \$1 30@1 55; Butter, \$1 75¢@2 for small and \$2@2 25 for large; Pink, \$1 30@1 50; Red, \$1 30@1 50; Lima, \$1 40@2 25; Pea, \$2 50@2 65; Small White, \$2 50@2 65; Large White, \$2 50@2 65; Blackeye, \$3@3 50; Red Kidney, \$2 50@3; Horse, \$1 60@1 70 ¢ cwt.

**SEEDS**—We quote as follows: Mustard, Brown, \$1 25¢@1 75¢; Yellow, \$1 75¢@2; Trisole, \$1 90¢@2 00; Canary, 3¢@4¢; Hemp, 4¢; Rape, 1¼¢@2¼¢; Timothy, 5¼¢@6¼¢; Alfalfa, 7¼¢@7¾¢ ¢ cwt; Flax, \$2@2 50 ¢ cwt.

**POTATOES**—Quotable at 60¢@65¢ ¢ cwt for new crop; old, 35¢@50¢; Oregon Burbanks, 40¢@75¢ ¢ cwt.

**ONIONS**—Quotable at 35¢@40¢ ¢ cwt.

**VARIOUS**—We quote: Summer Squash, 75¢@1 ¢ small box; Bay Squash, large box, \$1 50¢@1 75¢; Cucumbers, 40¢@50¢ ¢ dozen; Marysville, \$1 50¢@2 ¢ box; Asparagus, 25¢@75¢ ¢ box for ordinary and \$1@1 50 for better qualities; Rhubarb, 30¢@60¢ ¢ box; Los Angeles Tomatoes, \$3 50 ¢ box; String Beans, 4¢@4½¢ ¢ lb; Refugee, 4½¢ ¢ lb; Wax Beans, 4¢@5¢ ¢ lb; Green Peas, 75¢@1 ¢ ¢ sack for ordinary and 2¢@2½¢ ¢ lb for garden; Turnips, 50¢ ¢ cwt; Beets, 60¢ ¢ sack; Carrots, 40¢@50¢; Cabbage, 90¢@1 ¢ ¢ cwt; Garlic, new, 5¢@6¢ ¢ lb; Cauliflower, 60¢@75¢ ¢ dozen; Dried Peppers, 11¢@12¢ ¢ lb; Dried Okra, 15¢ ¢ lb.

**FRESH FRUIT**—Peaches—Quotable at \$1@1 25.

Apples—Quotable at 75¢ per box for new, being green.

Apricots—Quotable at 50¢@1 ¢ per box.

Berries—Gooseberries, 1½¢@2¢ ¢ lb; Strawberries, Sharpless, \$2@3 ¢ chest; Longworth, \$4@5; Raspberries, 50¢@60¢ per drawer and \$1 50¢@2 ¢ crate for Newcastle. Blackberries, \$1 25¢@1 50 ¢ crate.

Cherries—Quotable at 40¢@60¢ ¢ box for red and black, and 20¢@35¢ for white.

Currants—Quotable at 25¢@50¢ ¢ drawer.

**CITRUS FRUIT**—We quote: California Navel, 75¢@82¢; Seedlings, 50¢@1 ¢; Mexican Limes, \$4@4 50 ¢ box; Lemons, Sicily, \$3 75¢@4; California Lemons, \$1@1 50 for common and \$2@2 50 for good to choice.

**DRIED FRUIT**—Following are the prices furnished by the San Francisco Fruit Exchange. The figures presented represent carload lots, smaller parcels occasionally selling at slightly lower rates:

Apricots—Fancy Moorpark, 8¢; choice, do, 7¢; fancy, 7¢; choice, 6¢; standard, 5½¢; prime, 5¢.

Apples—Evaporated, 4¼¢@5¼¢; sun-dried, 4¢@4½¢.

Peaches—Fancy, 7¢; choice, 5½¢; standard, 5¢; prime, 4½¢; peeled, in boxes, 12¢@13¢.

Pears—Fancy, halves, 5¢; quarters, 4¢; choice, 4¢; standard, 3½¢; prime, 3¢.

Dried Grapes—1½¢ ¢ lb.

Plums—Pitted, 3¢@4¢; unpitted, 1¢@2¢.

Prunes—Four sizes, 4¢.

Nectarines—Fancy, 6¢; choice, 5½¢; standard, 5¢; prime, 4¢.

Figs—White, choice, 3¢@5¢; black, choice, 2¼¢@3¢.

Raisins—In sacks (50-lb. boxes selling at ¼¢ ¢ lb. higher): 4-crown, loose, 3¼¢; 3-crown, 2¼¢; 2-crown, 2¢; seedless Sultanias, 3¢; seedless Muscates, 2¢ ¢ lb; 3-crown London Layers, \$1 40 ¢ box in 20-lb. boxes; clusters, \$2; Dehesa clusters, \$2 50; Imperial clusters, \$3; 4-crown, loose, \$1; 4-crown, loose, faced, \$1 15 ¢ box.

**NUTS**—Chestnuts, 3¢@5¢; Walnuts, 6¢@7¢ for hard shell, 7¢@9½¢ for soft shell and 7¢@9½¢ for paper shell; California Almonds, 9¢@10¢ for soft shell, 2¢@2½¢ for hard shell and 6¢@7¢ for paper shell; Peanuts, 3¼¢@4¢ for California and 4¢@5¢ for Eastern; Pecans, 6¢ for rough and 8¢ for polished; Brazil Nuts, 7¢@7½¢ ¢ lb; Cocoanuts, \$4 50@5 50 ¢ 100; Pine Nuts, 2¢ ¢ lb.

**HONEY**—We quote: Comb, 9¢@10¢; water-white, extracted, 6¢@6½¢; light amber, extracted, 5½¢@6¢; dark amber, 4¢@5¢ ¢ lb.

**BEESWAX**—Quotable at 26¢@28¢ ¢ lb.

**BUTTER**—Creamery—Fancy, 12¢@12½¢; seconds, 11¢@11½¢ ¢ lb.

Dairy—Fancy, 10¢@11¢; fair to choice, 8¢@9¢; store lots, 7¢.

**CHEESE**—We quote: Choice to fancy, 5½¢@7¢; fair to good, 4¢@5¢; Eastern, ordinary to fine, 10¢@14¢ ¢ lb.

**EGGS**—Quotable at 11½¢@12½¢ ¢ dozen for store and 13¢@15 for ranch.

**POULTRY**—We quote as follows: Live Turkeys—Gobblers, 13¢; Hens, 12¢ ¢ lb; Roosters, \$4@4 50 for old, and \$7@9 for young; Broilers, \$2 50@4 for small and \$5@6 for large; Fryers, \$6@7; Hens, \$4@6; Ducks, \$4@6 for old and \$5@7 for young; Geese, \$1 25¢@1 75 ¢ pair; Goslings, \$1 25¢@1 75; Pigeons, \$1 75¢@2 ¢ dozen for old and \$1 50¢@2 for young.

**WOOL**—We quote spring:

Year's fleece, San Joaquin, ¢ lb. .... 6¢@6½¢

6 to 8 months do ..... 7¢@8½¢

6 to 8 months Calaveras and foothill, free. .... 8¢@10¢

Do, defective. .... 4¢@6¢

Northern, good to choice ..... 8¢@11¢

Do, defective ..... 6½¢@8½¢

We quote Nevada spring:

Light and choice ..... 8¢@10¢

Heavy ..... 6¢

**HOPS**—Quotable at 4¢@6¢ ¢ lb.

## CHOICE FRUIT ORCHARD.

Will be sold cheap; near Los Gatos; 40 acres; the best laid out and best cared for orchard (three years old) in Santa Clara Valley; prunes, peaches, pears and almonds.

New House, 8 rooms, lot 50x112½, town Palo Alto, \$1700. Also some choice building lots in the town.

JOHN F. BYXBEE,  
No. 42 Market St., San Francisco.

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WOOL, GRAIN, FLOUR

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WESTERN FERTILIZER & CHEMICAL WORKS,  
Successors to Mex. Phosphate and Sulph. Co.  
and H. M. Newhall & Co.  
REDUCED PRICES. SEND FOR CIRCULAR.  
309 Sansome Street, San Francisco.

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BLAKE, MOFFITT & TOWNE, Los Angeles

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## CALIFORNIA FRUITS

—AND—

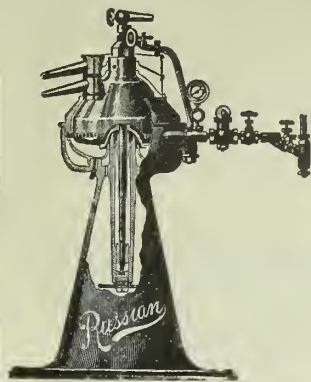
## HOW TO GROW THEM.

A Manual of Methods which have Yielded  
Greatest Success; with Lists of Varieties  
Best Adapted to the Different  
Districts of the State.

FOR SALE BY

Publishers Pacific Rural Press,  
220 Market Street, San Francisco, Cal.

## The Russian Cream Separator.



The good qualities of the RUSSIAN CREAM SEPARATOR cover all essential points. Its manufacturers have never found any weak points to cover up by accusing its opponents of "boring holes in the milk tubes, scratching out solder, etc.," or any such "baby talk." Its manufacturers do not believe an intelligent public would place credence in such rot. In selling the Russian we appeal to the common sense of farmers, and don't try to create a prejudice. What the farmers want is a good machine, and they have no use for one whose defects must continually be covered up by silly stories which they know are not true. The Russian does not get holes bored in its milk tubes, and it does not have the solder scratched out, and it does not explode. It skims exactly as much milk as is claimed for it. Send for circulars to

P. M. SHARPLES,

West Chester, Pa.,

Elgin, Ill.

Rutland, Vt.

## Baker &amp; Hamilton,

Sole Pacific Coast Agents,

SAN FRANCISCO. SACRAMENTO. LOS ANGELES. NEW YORK.

## GRANGERS' BANK

OF CALIFORNIA.

SAN FRANCISCO, CAL.

INCORPORATED..... APRIL, 1874



Capital Paid Up.....\$1,000,000  
Reserve Fund and Undivided Profits, 130,000  
Dividends Paid to Stockholders.... 832,000

—OFFICERS—

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I. C. STEELE.....Vice-President.  
ALBERT MONTPELLIER.....Cashier and Manager.  
FRANK MCMULLEN.....Secretary.  
General Banking. Deposits Received. Gold and Silver. Bills of Exchange Bought and Sold. Loans on Wheat and Country Produce a Specialty.  
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Gold and Silver Watches, Bicycles, Tricycles, Guns and Pistols, Carriages, Wagons, Carriages, Buses, Sleighs, Harness, Cart Taps, Skids, Sewing Machines, Accordions, Organs, Pianos, Cider Mills, Cash Drawers, Feed Mills, Stoves, Kettles, Bone Mills, Letter Presses, Jack Screws, Trucks, Anvils, Hay Cutters, Press Stands, Copy Books, Vices, Drills, Road Plows, Coffee Mills, Lathes, Banders, Dump Carts, Hand Carts, Forges, Scrapers, Wire Fence, Fanning Mills, Windmills, Engines, Saws, Steel Sinks, Grain Dumps, Crow Bars, Bolters, Tools, Bit Braces, Hay, Stock, Elevator, Bal-rod, Plowman and Counter SCALES. Send for free Catalogue and see how to save money. 151 So. Jefferson St., CHICAGO SCALE CO., Chicago, Ill.

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CLEANINGS IN BEE CULTURE.  
A Handsomely Illustrated BEE SUPPLIES  
Magazine, and Catalog of BEE SUPPLIES  
FREE. THE A. Z. ROOT CO., Medina, O.

## THE OWEN ELECTRIC BELT



Trade Mark—Dr. A. Owen

## FOR MEN AND WOMEN

The latest and only scientific and practical Electric Belt made for general use, producing a genuine current of Electricity, for the cure of disease, that can be readily felt and regulated both in quantity and power, and applied to any part of the body. It can be worn at any time during working hours or sleep, and

## WILL POSITIVELY CURE

RHEUMATISM  
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## WITHOUT MEDICINE

Electricity, properly applied, is fast taking the place of drugs for all Nervous, Rheumatic, Kidney and Urinal Troubles, and will effect cures in seemingly hopeless cases where every other known means has failed.

Any sluggish, weak or diseased organ may by this means be roused to healthy activity before it is too late.

Leading medical men use and recommend the Owen Belt in their practice.

## OUR LARGE ILLUSTRATED CATALOGUE

Contains fullest information regarding the cure of acute, chronic and nervous diseases, prices, and how to order, in English, German, Swedish and Norwegian languages, will be mailed, upon application, to any address for 6 cents postage.

## The Owen Electric Belt and Appliance Co.

MAIN OFFICE AND ONLY FACTORY,

The Owen Electric Belt Bldg., 201 to 211 State Street,

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The Largest Electric Belt Establishment in the World

MENTION THIS PAPER.

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(Established 1861).

Weekly, \$1 a year. 7 Editors.

160-page Bee-Book Free!

All about Bees and Honey

G. W. YORK &amp; CO.

56 Fifth Ave.

CHICAGO, ILLINOIS.



## From Tulare.

(Continued from page 345.)

more definite understanding would have been arrived at between the employer and employee.

A communication from C. T. Luidsey, secretary of the Visalia Fourth of July Committee, was read, inviting Tulare Grange to participate in the celebration and have a float in the parade, was referred to a committee for investigation, to report at the next meeting.

The Lecturer called the attention of the Grange to the proposed Grange summer encampment at Highland, in the Santa Cruz mountains, which brought up a conversational consideration of the subject, terminating in the adoption of the following expression of opinion, prepared and offered by the Lecturer:

Tulare Grange being informed that San Jose and Highland Granges are considering the propriety of organizing and conducting a Grange summer encampment at Highland in the Santa Cruz mountains, including a systematic educational course with lectures by professors from the University of California, from Leland Stanford Jr. University and from the State Normal School at San Jose, herein expresses its full approval of the same.

As education is a leading feature of our Order, we believe the proposed encampment and course of study will be to that extent a practical realization of the results at which we are aiming.

We believe the proposed encampment will promote social enjoyment, educational advantages and health recuperation. We hope to see its successful realization.

The location, permanent or temporary, of the encampment, can be safely left to the before mentioned Granges, the Executive and the Educational committees of the State Grange.

Bro. Zumwalt read a paper on dairying.

At the next meeting Bro. Forrer will read a paper on cutworms.

The meeting closed with an address by the Worthy Master, informing the Grange that he is about to locate in the northern part of the State, and will have to surrender his membership in Tulare Grange, of which for the past seven years he has been a zealous member; during all that time Tulare Grange has been to him a home; it has been his darling and his pride.

Tulare Grange commends Bro. Shoemaker to the good will of the fraternity wherever he may locate. J. T.

## Formosa's Unknown Interior.

The interior of Formosa is apparently still but little known, the Chinese authority being limited to the western coast country, the extreme northern part and a narrow strip of the east coast. The Chinese are gradually working their way inland, cutting down the forests and replacing them with indigo and tea plantations. Much of the soil is extraordinarily fertile. In some places there are three rice harvests in a year, and tea leaves are picked three times—in many places, indeed, seven times—a year. Anthracite coal of good quality is found in large quantities, and close to the sea—a thing of great importance to maritime powers like Japan. Alluvial gold has also been discovered in the beds of some of the northern streams. The Chinese have built a railroad from the port of Kelung, a distance of about 100 miles, to a town near the west coast.

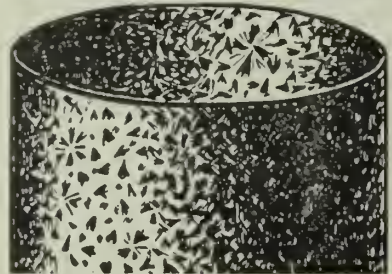
GLADSTONE computes that the habitual speakers of the English language have increased from 15,000,000 to 105,000,000 during the last 100 years, and that they will number 120,000,000 by the end of the year 1900. At that rate of increase, which is seven-fold each century, such speakers will include not less than 840,000,000 by the end of the year 2000.

There is more Catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease, and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven Catarrh to be a constitutional disease and therefore requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from ten drops to a teaspoonful. It acts directly on the blood and mucous surfaces of the system. They offer one hundred dollars for any case it fails to cure. Send for circulars and testimonials. Address: F. J. CHENEY & CO., Toledo, O.

Sold by Druggists, 75c.

**FOR TIRED EYES.**—Take a cup brimful of water. Add sufficient salt to be just perceptible to the taste. Hold your eyes to the water so that your lashes touch it, then wink once and the eyes will be suffused. Do not wipe them. This so refreshes the eyes that they feel like a new pair. Do not forget the good old rule—as soon as you "feel your eyes," stop using them. By following this treatment, very little time will be wasted waiting for tired eyes.

**STEEL TANKS**  
We furnish steel tanks with covers, all galvanized after completion, in nests of ten, 8 to 12 feet high and 30 to 36 inches in diameter, at 2½c. per gallon. They do not rust, shrink, leak, give taste to water, nor allow foreign substances to get in. They can be put in garret or barn end thus are protected from freezing. They take no setting up, are cheaper than wood. Tank substructures of all sizes made to order. Send for price list and designs for substructure and ornamental water supply.  
**AERMOTOR CO. CHICAGO.**  
2½ CTS PER GAL.



Did you ever stop to think how completely the Aermotor Co. made the modern windmill business? How it has monopolized this entire line of manufacture because of its ideas, inventions, designs, qualities and prices, or forced others to be literal and servile imitators? Witness the steel wheel, the back geared pump, the high geared power mill, the steel towers, fixed and tilting, the galvanizing of work after completion, the grinder centrifugal feed, the improved irrigating and other pumps, the all steel pole saw—one of the most popular things we ever put out—the steel storage and stock tanks. Everything we have touched we have bettered and cheapened. It is the thing we have delighted in and it has paid. We have established a score of branch houses, so as to have all these goods near those who want them. The Aermotor Co. has but one more ambition. It wants to build and fill one more new building. It has 2 acres of land at its present location unoccupied by buildings. It expects to commence in June to cover that 2 acres with a single building, 7 stories high. This will give it 14 more acres of floor space. Then when the public demand requires more goods than can be produced with this added space, it will refuse to extend further, or make any effort. It will have done its share to supply that demand. It will then turn away all new comers until that time it expects to continue to supply the world with the greater part of its wind wheels, towers, grinders, feed cutters, pumps, steel frame buzz saws, steel storage and stock tanks, steel substructures, etc., etc., galvanized after completion. It will continue to deal most liberally with the public, furnish repairs at a low price, and be the great model square-dealing wind power and water supply house of the world. AERMOTOR CO., CHICAGO.

**"HARTMAN" WIRE FENCE**  
For FIELD and FARM

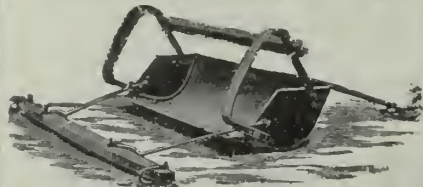


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Holds but DOESN'T HARM your stock.  
Can be built to STAY TIGHT all seasons.  
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In answering advertisements mention this paper.

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The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Leveling Land, Road Making, etc.  
This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.  
This Scraper is all Steel—the only one manufactured in the State.  
Price, all Steel, four-horse, \$40; Steel, two-horse, \$31. Address all orders to  
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**HOOKE & CO.** 10-12 DRUMM STREET, S. F.

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Rheumatism,  
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....WHAT MORE IS NEEDED THAN A PERFECT CURE....

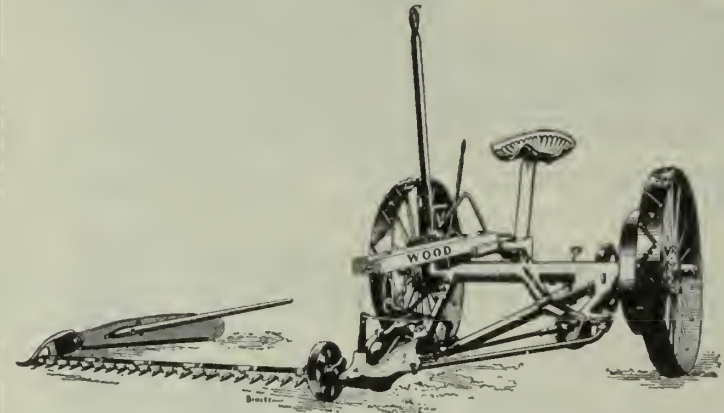
An 1895 Machine.

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NEW!

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Steel Drive Wheels, Steel Frame, Steel Shafts, Steel Knife Head, Steel Jaws for Pitman, adjustable. Steel Wrist Pin, self-oiling; Brass bearings; Eye-Winker Oilers, dust proof; Serrated Guard Plates; "Wobbler" Track Board; Spring Foot Lift and Cutter Bar, acts when wanted, at other time resting. Adds no extra weight to right hand drive wheel. Other improvements described in catalogue. Send for it.

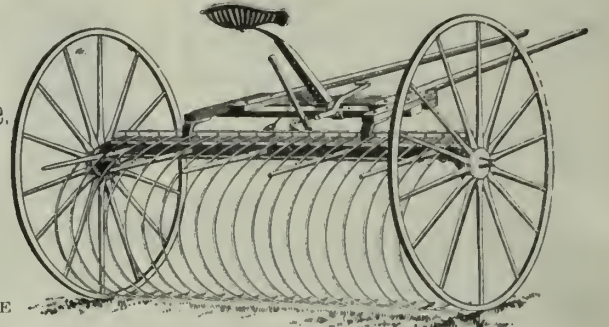
ALL GOOD.

Walter A. Wood Hay Rake.

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If you want the GENUINE  
Wood Goods address

**ALLISON, NEFF & CO., San Francisco.**

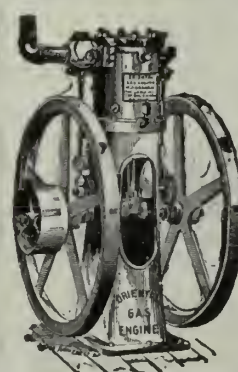
B. HAYMAN, Los Angeles, Cal.

**DEWEY & CO.,** 220 Market St.,  
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**PATENT SOLICITORS.**

ESTABLISHED 1863

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced, first-class agency. We have able and trustworthy associates and agents in Washington and the capital cities of the principal nations of the world. In connection with our scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of patents already granted, for the purpose of determining the patentability of inventions brought before us enables us to give advice which will save inventors the expense of applying for patents upon inventions which are not new. Circulars and advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 220 Market St., S.F.

## The Oriental Gas Engine



IS THE BEST because it combines simplicity of construction with power and economy of space. It can be run with natural or manufactured gas or gasoline. It can be used for pumping purposes, as well as for all purposes where a perfect engine is required, with the advantage of lessening the risk of explosions. No licensed engineer at a high salary needed to operate it. Send for circulars and prices if a good safe engine is what you need.

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FOR SEVENTY-FIVE DOLLARS

This College instructs in Shorthand, Type-Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for full six months. We have sixteen teachers and give individual instruction to all our pupils.

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Has been established under a thoroughly qualified instructor. The course is thoroughly practical. Send for Circular. C. S. HALEY, Sec.

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## List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey &amp; Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING MAY 14, 1895.

539,162.—TAP FOR BARRELS—H. C. Black, S. F.  
 539,122.—GAS ENGINE—H. J. Dykes, Peralta, Cal.  
 539,258.—DRYING FRUIT—F. W. Gibson, Lakeport, Cal.  
 539,261.—CAN OPENER—J. Gould Jr., Berkeley, Cal.  
 539,134.—CAR FENDER—H. P. Johnson, S. F.  
 539,140.—SASH FASTENER—J. W. Lord, Cucamonga, Cal.  
 539,280.—CAN LABELING MACHINE—E. E. Magee, San Jose, Cal.  
 539,144.—BUTTER CUTTER—R. Packard, Smith River, Cal.  
 539,368.—NEGATIVE PLATES—W. S. Phillips, Seattle, Wash.  
 539,204.—VALVES—H. H. Tracy, Hollister, Cal.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

## Pulsations of the Earth's Crust.

According to Professor John Milne the crust of the earth is in a constant state of agitation, earth movements being experienced at all times and in all lands; but they are so slight from month to month and year to year that they generally escape detection. In all the countries of Europe and in many of those in Asia (most notably Corea and Japan) these tiltings are so great as to be noticed.

Germany seems to be the seat of greatest European crust agitation, Japan occupying a smaller position in Asia. Of the above two countries Prof. Milne says: "In both Germany and Japan a tidelike movement too great to be produced by lunar attractions has been observed, the ground being gently lifted every twenty-four hours, and sometimes twice, and in all cases buildings, trees, etc., stand slightly inclined, like cornstalks in a gentle, steady breeze." In short, the earth is constantly breathing, so to speak, the crust making each respiration by a gentle rising and falling, similar to that of the chest in air-breathing animals. It is believed that a certain per cent of this earth crust disturbance is due to conditions similar to those which bring about earthquakes. This is especially true as far as it regards Japan, where it has been traced to the continual opening and closing of the broken strata in the main range of the mountains.

SEND 25c to the Currency Pub. House, 178 Michigan St., Chicago, for a copy of the "Financial School at Farmerville." Everybody is reading it.

## FARMERS, ATTENTION!

## DO YOU WANT TO EMPLOY ANYBODY?

If so, we furnish Farm Hands, Teamsters, Men and Wives, etc., promptly. No charges to employers. Send in your orders to

J. F. CROSETT &amp; CO.,

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Olive Dip.

"Greenbank" Powdered Caustic Soda and Pure Potash.

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GEO. H. KUNZ, Sacramento.

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|-------------------------------|--------------|
| Mission, 3 years.....         | 5 to 6 feet. |
| Mission, 2 years.....         | 3 to 4 feet. |
| Manzanillo, 2 years.....      | 2 to 3 feet. |
| Nevadillo, 2 and 3 years..... | 4 to 6 feet. |
| Picholine, 2 years.....       | 2 to 3 feet. |

## Olive Trees.

ALL KINDS OF NURSERY STOCK. Send for our Book on Olive Culture.

Howland Bros.,  
POMONA, CAL.

TREES of GOLD plum, SPLENDOR prune, Van Deman quince—choice of Burbank's 20 Million "new creations." STARK Trees PREPAID everywhere. SAFE ARRIVAL guaranteed. The "great nurseries" save you over HALF. Millions of the best trees 70 years' experience can grow; they "live longer and bear better."—Sec. Morton. STARK, B44, Louisiana, Mo., Rockport, Ill.

## Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

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F. H. BURKE, 626 Market St., S. F. A1 Prize Holsteins; Grade Milch Cows. Fine Pigs.

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EGGS FOR HATCHING—Buff, Brown and White Leghorns, Plymouth Rocks, White Wyandottes, Silver Wyandottes, Light Brahmas, Indian Games, Black Spanish, Bantams, Pekin Ducks—Two Dollars setting. Mammoth Bronze Turkey, White Holland Turkey—Three Dollars dozen. Theodore Cushing, Spokane, Washington.

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WELLINGTON'S IMPROVED EGG FOOD for poultry. Every grocer and merchant keeps it.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for illustrated and descriptive catalogue, free.

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J. B. HOYT, Bird's Landing, Cal. Importer and Breeder of Shropshire Sheep; also breeds Cross-bred Merino and Shropshire Sheep. Rams for sale. Prices to suit the times. Correspondence solicited.

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POULTRY KEEPERS CAN YOU AFFORD TO PASS THIS BY  
 SEND YOUR NAME & ADDRESS ON POSTAL CARD TO  
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 BEFORE THEY WILL SEND YOU SOMETHING USEFUL  
 BY DECEMBER 15, NEXT, OFFER S. C. W. LEGHORNS



## In These Dull Times

You Can Largely Increase

Your income by buying an Incubator and engaging in the chicken business. Send stamp for our catalogue of Incubators. Wire Netting, Broomed Fowls and Poultry Appliances generally. Remember the Best is the Cheapest. PACIFIC INCUBATOR CO., 1317 Castro St., Oakland, Cal.

—THE—  
HALSTED + INCUBATOR  
COMPANY,1312 Myrtle Street, Oakland, Cal.  
Send Stamp for Circular.

## FOR SALE.

Holstein= BULLS  
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I have for sale 10 Thoroughbred Holstein-Friesian Bulls of superior breeding—Clothilde, Netherland, Aagie and Lady Fay families, ranging in age from 6 to 18 months. Apply

HALL'S STOCK FARM, Marysville,  
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At 10 cents per dozen. If you doubt it, write me and I will tell you how. Give plainly your name, address and business. H. K. STARKWEATHER, 130 California St., San Francisco.

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## 1,000,000 Trees for the Season of 1894-95 in Stock.

Acknowledged everywhere to be equal to the best. Guaranteed to be healthy and free from scale or other pests.

Send for Catalogue and Prices. Correspondence solicited. Address:

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## PROTECT YOUR YOUNG TREES

\*\*\*\*\*BY THE BEST METHOD.\*\*\*\*\*

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ONE ROLL SUFFICIENT FOR 1000 TREES.

USED IN CONNECTION WITH PRINTERS' INK GIVES ABSOLUTE PROTECTION AGAINST  
 ATTACK BY CUT-WORMS AND OTHER TREE PESTS.

## PARAFFINE PAINT CO.

116 BATTERY STREET  
San Francisco, Cal.  
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## Protect Your Trees

—WITH—

Gilman's Patent Tule Tree Protector.

PATENTED AUGUST 1, 1893.

FIRST PRIZE—Medal and Diploma—California Mid-Winter International Exposition.

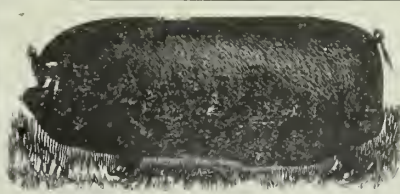
Cheapest, best and only one to protect trees and vines from frost, sunburn, rabbits, squirrels, borers and other tree pests.

For testimonials from parties who are using them, send for descriptive circulars.

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We have Berkshires of the most fashionable strains. They are from Prize Winners and are Prize Winners themselves. We have litters old enough to ship, also a few young boars 8 to 10 months old that we will sell at low prices. Correspondence solicited.

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Simplest and most economical engines on earth.

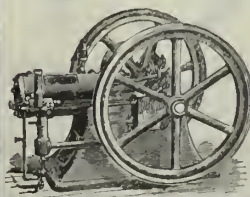
FULLY GUARANTEED.

Requires only a few minutes' attention a day. Guaranteed cost of running, 1 cent per hour per H. P.

JOSHUA HENDY MACHINE WORKS,

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LIGHT WEIGHT

## STEEL HEADER.

REAR VIEW.

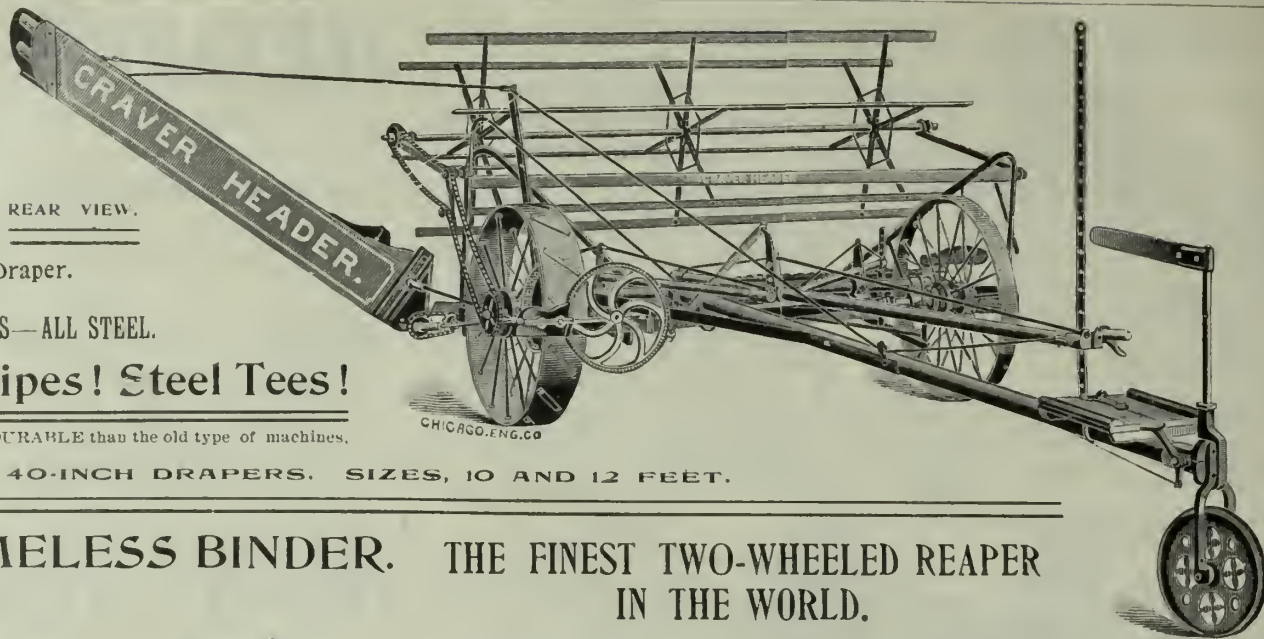
The Improved Randolph with Stop Draper.

A NEW DEPARTURE IN HEADERS—ALL STEEL.

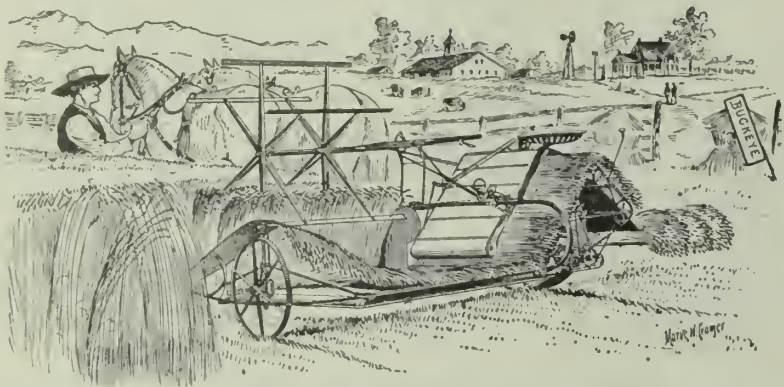
Steel Angles! Steel Pipes! Steel Tees!

LIGHT! STRONG! HANDSOME! MORE DURABLE than the old type of machines, yet, in spite of increased strength, is LIGHTER.

40-INCH DRAPERS. SIZES, 10 AND 12 FEET.



## The BUCKEYE FRAMELESS BINDER. THE FINEST TWO-WHEELED REAPER IN THE WORLD.



THE BUCKEYE FRAMELESS is a complete Binder in every particular. It will cut, bind and elevate better, run lighter, last longer, cost less for repairs, and do better work in every condition of crop than any other binder in existence. Built on honor, and Honest Work from Top to Bottom.



BUCKEYE TABLE RAKE REAPER AND MOWER COMBINED

Buckeye Reaper only.....

Mower Attachment only.....

\$175 00

140 00

40 00

VEHICLES AND FARMING IMPLEMENTS OF EVERY DESCRIPTION.

Send for our No. 19 Catalogue. Just issued.

HOOKER &amp; CO., 16 &amp; 18 DRUMM ST., SAN FRANCISCO, CAL.

WE ARE IN IT!

“DEERE”

High and Medium Grade.

REGULAR  
—AND—  
ROADSTER.  
CAN'T BE BEAT.

With all Late Improvements.

“NATIONAL”

High Grade Only.

RACER  
—AND—  
ROADSTER.  
FOR GENTLEMEN AND LADIES.

BICYCLES

AGENTS WANTED.

Deere Implement Company,

305 AND 307 MARKET ST. .... SAN FRANCISCO, CAL.



# THE PACIFIC RURAL PRESS

## AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 23.

SAN FRANCISCO, SATURDAY, JUNE 8, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

### Midsummer in the Nurseries.

The rush of the season in the nurseries of deciduous fruit trees has long gone by; it is even late now for the handling of evergreen trees, and the nursery activity for the next three months will lie in constant cultivation, in budding, and in irrigation where it is needed for the vigorous and satisfactory growth of the stock. To the public view it might seem that this is the time for midsummer dozing under the handsome specimen trees or in the shade of the buildings, and the conclusion of the average man would be that there is little to see at the nurseries at this time of the year. This view of the matter is not altogether correct.

It is true that some, perhaps most, of our newly established nurseries have little to show at this season except the long rows of seedlings through which the budders are patiently pursuing their tedious task with tender knees and aching backs, but our older nurseries which carry a stock of ornamentals and have also an experimental orchard for fruiting the hundreds of varieties which are brought out as novelties, really offer the visitor most instructive and entertaining object lessons all through the summer months. We apprehend that the fact is not

nurseries are, as a rule, less interesting in these directions than the older Eastern concerns, both because of their youth and because we have had during the last score of years such a passion for the commercial and such an apathy for ornamental planting. But age will change all this, and in another decade or so the better class of California nurseries

nursery in point of area and of variety, as well as extent of propagation, is the California Nursery Company, at Niles, Alameda county, and Mr. John Rock, the president and manager, is one of our best informed plantsmen, as well as a leader in enterprise and geniality.

We have on this page three scenes on the grounds of this nursery which will indicate its extent and give a hint also that its grounds are not alone an area of commercial stock but also the abode of much that will delight the eye and win the approval of the plant lover. The pictures are not the best that the place could afford, for its 450 planted acres contain much that is even more picturesque than the photographer selected. And still, the broad avenue with its background of fine Canary Island dates, yuccas and dracaenas, and its border of flowering shrubs, may be a promise to the beholder of other scenes to be enjoyed as he pushes on into the interior of the grounds, where tasteful buildings stand among banks of varied foliage and acres of bloom. So, too, the other view which gives a glimpse of the conifers, hundreds of varieties of which are betokened by the snap of the camera, which is merely such a glance as one might get in rapid passing.

California nurseries do not do much



MAIN AVENUE AT THE CALIFORNIA NURSERY AT NILES.



A GLIMPSE OF THE CONIFER SECTION.



THE PROPAGATING HOUSES.

adequately appreciated by the public, hence our allusion to it.

A well-kept nursery for general propagation of economic and ornamental trees and plants discharges a most important public function wholly aside from its commercial features. At the East the oldest and greatest nurseries are now endowed with specimen growths of tree and shrub in greater variety than can be found elsewhere, except, perhaps, in the oldest botanic gardens. These collections do not usually have, it is true, the scenic features which pertain to parks nor the systematic accuracy of the botanic gardens, but still they often have plant treasures which cannot be found in places of more public resort, and they comprise a most valuable supplement to these establishments. California

will be endowed with more striking beauty in specimen planting and more rapid development than the establishments at the East, because our conditions favor a wider exotic flora and a quicker attainment of mature forms.

A fair promise of the future can now clearly be seen in what has already been attained. At at least a dozen places in California we have nurseries which have annexes devoted to the experimental growth of fruits and specimen growth of ornamentals, and in such places can now be found some of the finest specimens of exotics, found to be hardy in this climate, that the State can show. It is a delight to the plant lover to seek these out and to unselfishly admire them or to learn from them valuable lessons for the planting of his own grounds. Our greatest

as a rule with glass, except in the low houses which serve for commercial propagation, and the California Nursery Co. is in accord with this rule. The University, the Park and the wealthy amateur have the iron and glass aloft, but for the inhabitants of these honorable elevations the low houses of the nurseries are the incubators.

The grounds at Niles show what can be done on the deep alluvial soil of the northern extension of the Santa Clara valley, which lies on the east side of the bay of San Francisco. It is not a specially protected region, and lessons drawn from the open-air plant display to which we have alluded will usually prove true in all the coast valley regions of California, where the ruling factor is freedom from extremes of either heat or cold.



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Our latest forms go to press Wednesday evening.

Registered at S. F. Postoffice as second-class mail matter.

ALFRED HOLMAN, Editor.  
E. J. WICKSON, Special Contributor.

San Francisco, June 8, 1895.

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## The Week.

### Weather and Crops.

Radical weather changes are still rife, but fortunately for us California is far removed from their activity. For several days past the thermometer at the East has endeavored to make up for its unseasonable May depression by a June spirit which carried the mercury above 90° with the appalling loss of life which that degree means at the East. Such heat exceeds the records at many places for this date. At the same places, two weeks ago, occurred the coldest weather ever recorded in May. Such are the extremes which eastern crops have to pass through this season. As the weather report on another page shows, California has gone along on a comfortable medium course.

### Death of L. W. Buck.

Many readers will be shocked to hear of the death of Ex-Senator L. W. Buck, the result of a fall from a driving cart in Oakland. Mr. Buck died on the morning of June 4. He was born in New York State, July 8, 1834, and came to California in 1874, settling on a farm in Yuba Valley. He served a short time in the Union Army in 1861, then passed a decade in merchandizing in Iowa. In California he began with little and by his industry and enterprise in the fruit business amassed quite a fortune. Mr. Buck has been very prominent in our fruit affairs for the last ten years; for eight years he was manager of the California Fruit Union and for several years a member of the State Board of Horticulture. He will be sadly missed at assemblages of fruit growers. Mrs. Buck and five children of mature age survive him. They have the sympathy of all in their bereavement.

### First Full Fruit Train.

Though many cars of fruit have gone East, the first full train left Sacramento on Tuesday evening of this week. The train consisted of ten of the new ventilator cars loaded with peaches, apricots and cherries from the Vacaville district, to be landed in Chicago in three days. Trains of this character will be sent out daily as soon as the receipts of fruit warrant it.

### Fruit Values.

Early sales of California fruits at the East are showing quite satisfactory prices for whatever arrives in good condition, and there is a general confidence in the season's outlook by those who have fruit crops coming on. The anticipations seem quite warranted, for we shall have a moderate supply; it will be of the best quality, and the opening for it at the East could hardly be better. The dried product this year will be comparatively small, and not a day

should be lost in making preparations for its handling in the best possible shape. We lose too much each year by shipping poor fruit. There is now no excuse for it. All know better, or can easily learn better, and nothing but shiftlessness destroys quality. It will apparently be a good year for good prices for good fruit. It will never be good year for anything else.

### Yosemite Valley.

It is seasonable to say something about the valley, and here we have it. The Commissioners appointed by the Governor of California under an act of Congress to care for the Yosemite valley and the Mariposa big-tree grove will hold their annual meeting in the valley next week. There are eight Commissioners: H. K. Field and Max Goldberg, San Francisco; John R. O'Brien, Oakland; George B. Sperry, Stockton; John Boggs, Colusa; E. P. Johnson, Los Angeles; H. J. Ostrander, Merced, and A. J. Clinch, Mariposa. Governor Budd, by reason of his official position, is a member of the commission, and he, as well as General John F. Sheehan, secretary of the Board, will attend the meeting next week. The appropriations for Yosemite valley and the Big Tree Grove were materially diminished at the last session of the Legislature, and the Commissioners now particularly desire that the Governor shall inspect the hotels, bridges and trails, so that he can speak with accurate knowledge of affairs when the Legislature again convenes. California should do something to keep this great mecca of the tourist in good order. It is a prominent resource of the State, as well as a great natural endowment. The Yosemite on the east and the Golden Gate Park on the west should be generously cherished and improved in the true sense of that word.

### The Yuba City Meeting.

The meeting at Yuba City last week was a great success. Indeed, we do not recall a similar occasion within the past few years when the representation of orchard interests was so large and the general character of the papers so high. The attendance included Mr. A. T. Hatch of Suisun; Hon. L. W. Buck and Mr. Frank H. Buck of Vacaville; President Lelong, Hon. John Markley of Sonoma; Mr. George H. Appel and Mr. H. A. Fairbank of Sacramento; Gen. N. P. Chipman of Red Bluff; Mr. C. W. Reed of Sacramento; Mr. John H. Gill of Chico; Capt. W. J. McCann of Newcastle; Prof. E. J. Wickson of Berkeley; Hon. J. A. Filcher of San Francisco; Mr. F. M. Righter of Santa Clara; Maj. H. Weinstock of Sacramento; Mr. Eben Boalt of Palermo; Mr. S. S. Boynton of Oroville, with others—these in addition to the attendance of local orchardists to the number of a hundred or more. The ladies of Yuba City Grange entertained the entire company to substantial luncheon, and every citizen of the town seemed to consider himself an active member of the Committee on Entertainment. The papers—some of which appear in this issue of the RURAL, to be followed by others next week—were of exceptional character, being well worth the attention of all orchardists who wish to keep up to date in planting and marketing matters and in the general literature of California horticulture.

### To Reform the Auctions.

The most timely subject before the Yuba City meeting was that discussed by Major Weinstock of Sacramento, whose address is given in full on page 356. Major Weinstock is chairman of the committee named by the Annual Horticultural Convention (held at Sacramento last October) to reform the auction system in the Eastern markets. In his address at Yuba City he reported facts of great interest to every grower of fruits in California. This address—see page 356—must be studied by every grower who seeks to know the present marketing situation. In view of the facts set forth in it, Gen. Chipman offered the following resolutions, which, after a full discussion in which their adoption was advocated by Mr. W. P. Hammon, Frank H. Buck, A. T. Hatch, B. F. Walton and others, were unanimously adopted:

WHEREAS, At the Fruit Growers' State Convention held in Sacramento in November, 1894, it was shown that one of the chief causes of the disastrous results in the marketing of fresh fruits in the East was the existence of two or more rival auction houses in various cities; and

Whereas, The conclusion was reached that such rival auction houses were needless to either buyer or seller and were a serious detriment to the welfare of the California grower; and

Whereas, A resolution was unanimously adopted at that convention by a rising vote that a union be organized, to be known as the Fruit Growers' and Shippers' Association of California, for the purpose, among other things, of establishing one auction room only in each Eastern auction point; and

Whereas, The members of said convention did pledge themselves to give such association, when formed, their earnest and heartiest support; and

Whereas, Such association was formed, including the most prominent fruit growers and shippers of California, which selected a union auction room in New York, which is free and open to all receivers and auctioneers of California fruit and to all buyers; and

Whereas, We learn that there is a movement on foot to establish a rival auction house in the City of New York, there-

by perpetuating the serious evils of the past and defeating the expressed wishes of the grower; therefore he it

Resolved, That the fruit growers and shippers assembled in convention in Yuba City do hereby protest against any such movement in the direction of establishing a rival auction house in the New York market, and we call upon fruit growers and shippers to stand by the pledge taken at the November convention and to withhold their business and their support from those engaged in the effort to defeat the desired end of the fruit growers; and be it further

Resolved, That the secretary of this convention be and is hereby instructed to furnish the press throughout the State and the receivers of California fruit in all Eastern markets with copies of these resolutions.

The effect of this action is to declare a boycott against any firm which declines to accept the open, single-room auction system proposed by the fruit growers of this State.

### Co-operative Warehousing.

Mr. F. M. Righter of Campbells, father of the exchange system as it has grown up in the Santa Clara Valley, is seeking to promote a very easy and simple plan of co-operation which looks only to the collecting and systematic grading of dried fruits. He finds that there is great practical saving in having the fruit product of a neighborhood in one place and divided into specific grades. It facilitates the business of selling in many ways and saves a vast amount of chasing about the country on the part of buyers, for all of which the producer has eventually to pay. As a means of promoting this idea Mr. Righter introduced the following resolutions which were unanimously adopted:

WHEREAS, The production of a superior dried fruit is purely a manufacturing business and is subject to all the influences in marketing that have been employed by the most successful manufacturers; and

Whereas, Uniformity in the grading and packing has always been considered vitally important and therefore an urgent necessity in the development of every new business; therefore he it

Resolved, That we urge all the fruit growers of this State to work for and use their influence in perfecting a uniform system in the grading and packing of all kinds of dried fruit, employing as a basis the system adopted last year by the California Fruit Exchange, the Fruit Unions and Exchanges of Santa Clara valley and the San Francisco Fruit Exchange.

### Agricultural Training College.

There is an institution at Penryn, Placer county, which is doing much to bring that excellent early fruit district to the attention of young Englishmen who are disposed to seek homes and opportunities for investment in this State. Mr. Frank Karlake, an Englishman who has been resident in the Penryn region for several years, conceived the idea of establishing a training school which could aid new comers in securing such information of local horticultural practices as would materially help them in embarking upon enterprises of their own and maintain guardianship over them while they were new to the country. This idea commended itself to English parents who wished to help their sons to new homes and during the past year, the first of the college, there have been about twenty pupils who came to California under Mr. Karlake's care. The writer recently had the pleasure of lecturing to them on California horticultural practices for a week and was deeply impressed with their intelligence, earnestness and desirability as a factor in forwarding the development of this new State. We found the pupils very comfortably housed in a fine new building of large capacity, well fed and generously provided for otherwise. Among the directors of the school are P. W. Butler, H. E. Parker and Andrew Ryder, well known as progressive and successful fruit growers of the Penryn district. The directors give practical instruction on their own places in horticultural work and the college has also a superintendent, Mr. Bridges, whom we found exceptionally well informed. The immediate vicinity of the college is being planted with a view of demonstrating the suitability of different plants and trees to the locality and commercial orchards of considerable area are also being set out.

### Wheat Market.

Since our last issue the transfer of the Fair wheat has been accomplished at a figure of 85c per ctl. It has suffered somewhat by its long storage. It is to go forward as rapidly as possible and will, it is to be hoped, soon be entirely out of the way. As distant markets have been rather slow and weak, there has been little done here in the face of the Fair movement. The outlook for the trade in the new crop is, however, well spoken of. While the harvest is proceeding the market will have a chance to tone itself up, for all believe there is a degree of strength in it above what has recently been disclosed.

### Canning Interest.

The activity in canning enterprises to which we recently alluded has continued. The new establishment at Haywards has started up and promises to make a fine run. The Sebastopol cannery has been largely refitted and improved, and other establishments are now in the activity of the opening of the season. We shall probably have a largely increased pack this year and it will do much to help market values.



## From an Independent Standpoint.

The vacancy in the Cabinet is, so it is said, to be filled by the promotion of Attorney General Olney. It is a rather curious appointment, for Mr. Olney, though a very respectable man, is in no sense a public figure. It seems out of keeping that a station dignified by the incumbency of Jefferson, Webster and Calhoun, and in more recent times by Seward, Bayard and Blaine, should be given to a man who is rather more widely known as a tennis player than as a statesman. But this is Mr. Cleveland's way. He prefers to be surrounded by men whose fortunes are of his own making, and upon whose complaisance he may depend, than by men of reputation and of independent character. It was this preference which led him to appoint his former private secretary (Lamont) chief of the War Department, to make his former law partner (Bissell) Postmaster General, and to fill other Cabinet posts with men whom nobody ever heard of till their names were sent up to the Senate. Only two men of political reputation—Gresham and Carlisle—were made Cabinet officers at the beginning of the administration, and the death of the former will leave the latter the only member of the Cabinet circle whose political character is above that of an executive clerk. It is possible that Mr. Cleveland is right; that the public work will be best done by men of routine capacity rather than by statesmen; but the notion is a new one, and its application certainly robs the Government of much which hitherto has given it impressiveness and high public respect. From Bayard and Blaine to Olney is a progress not calculated to inspire enthusiasm.

The Republicans of Ohio in convention last week declared as follows:

For restoration of the protective principle in tariff legislation.

For the "use of both gold and silver as standard money, either in accordance with a ratio to be fixed by an international agreement, if that can be obtained, or under such restrictions and such provisions, to be determined by legislation, as will secure the maintenance of the parity of values of the two metals, so that the purchasing and debt-paying power of the dollar, whether of silver, gold or paper, shall be at all times equal."

For protection for sheep husbandry.

That "the proposed Nicaraguan canal is needed for commercial extension and national defense, and that it ought to be constructed and operated by the Government of the United States or under its protection; we commend this project to our representatives in Congress."

For the pension system as it stands.

Denouncing the Administration for lowering the American flag in Hawaii, and for allowing British forces to land in Nicaragua.

Nominating McKinley for the Presidency.

Nominating Ex-Gov. John B. Foraker for U. S. Senator to succeed Bryce.

The principal address was by John Sherman, whose well-known financial views were applauded to the echo and reflected in the platform as above stated. This proceeding is very notable because in a measure it forecasts the position of the National Republican Party in the Presidential fight of next year. The nomination by the convention of a candidate for U. S. Senator is a precedent very likely to be followed by other States and almost certain to become the practice of the country. It is a practicable substitute for popular election and though liable to abuses, is on the whole to be commended.

This country has rarely seen such a contest as is just now going on between President Cleveland and his party. Left to itself, it is plain that the Democratic party would declare for free coinage of silver. But Mr. Cleveland does not leave it to itself. He has recently written two letters for publication upholding the gold idea in the most positive terms, and he has sent out his Cabinet officers on speech-making tours in support of the same principle. This activity on the part of the Administration is paralyzing to the efforts of those who are striving systematically to commit the party to free silver. They find it easy to get up great popular demonstrations, but when it comes to the party leaders they are either for the Cleveland programme or are dumb. Thus far the President, through his control of its machinery, has held his party away from a general declaration for free silver; but it is very much to be doubted if his influence will last until the meeting of the National Convention, one year hence. If either of the two greater parties are to take up the silver

issue, it is in the nature of things that it should be that whose strongholds are in the agricultural and debtor States.

Of late years the world has heard a great deal in advocacy of "art for art's sake." There has been a widespread movement in support of the notion that beauty, apart from any idea of utility, is a thing worth supreme effort; and it has further been claimed that a refined æstheticism is a safe and sufficient substitute for old-fashioned moral discipline. Cords of books have been written in support of this principle; it has more or less unconsciously become the ideal of a certain advanced society; and it has practically (if not nominally) found acceptance among some who claim to be Christians. Plain folks have rejected the claims of "art for art's sake," and have never ceased to contend that the art which has no motive in utility is not only worthless, but degrading. The picture, no matter how correctly colored, which embodies no wholesome idea, is a waste of effort. The book, no matter how cunningly worded, which teaches no lesson of life, is a persistent mischief. The acting which yields neither refreshment of spirit, nor mental nor moral expansion, may be ever so "artistic," but it is worth no man's money nor time. These reflections are suggested by an incident in England which is just now engrossing world-wide attention. Oscar Wilde, the chief apostle of æstheticism—of "art for art's sake"—has just been convicted of a crime so indecent that it cannot be named. And *this* is what comes of substituting art for religion and morality as a principle of life. We may well thank God that æstheticism makes little headway on American soil.

## Gleanings.

SAN JOSE GROWERS are paying 5 cents per lb. for cherries in Pajaro valley.

OLIVE GROWERS about Oroville are not able to supply the demand for their pickled ripe olives.

THE Pajaro valley has shipped many tons of strawberries to the San Joaquin valley towns this season.

PORTERVILLE shipped a carload of new-crop wheat ten days ago. It was harvested on O. M. Smith's ranch.

THE Sonoma County Horticultural Society is talking about making a fine county exhibit at the Atlanta Exposition this fall. A committee has been named to consider ways and means.

*Pajaronian*: The apple drop is unprecedentedly large this spring, and has seriously cut into the amount of the crop. The Belleflowers have thinned rapidly and the Newton pippins set poorly. The high winds of the past week have increased the drop.

SAN JOSE *Tree and Vine*: Do not forget to whitewash the trunks of the trees for protection against peach-borers. The insects will soon take their winged form and lay their eggs. This whitewash coat prevents the very young insect getting to the tree.

OROVILLE *Register*: There is no fruit that hangs in prime condition upon the tree as long as the orange. Men began picking here last November and to-day Joe Wardwell started for Downieville and Gold Lake with a load of golden beauties that he had obtained fresh from the trees in this town. Joe has sold over 30,000 oranges and lemons since he began peddling this spring.

SANTA ANA *Blade*: H. C. Wagner of this city has embarked in an industry which promises a liberal return for his trouble. Mr. Wagner has turned his attention to raising mushrooms during his spare time. He has prepared a mushroom bed in his shed and has planted the "seed" for the propagation of the esculent. He has been working on the mushrooms for several weeks past and has met with every encouragement. Samples of mushrooms grown from spawn prepared in his shed compare favorably in size, shape and flavor with wild or imported ones.

LOS ANGELES *Times*: Horticultural Commissioner H. B. Muscott was sent by the Board of Supervisors up to Ventura and Santa Barbara counties to investigate the work of the black scale and the effectiveness of the parasite, the famed *Rhizobius ventralis*, and on his return made a very thorough report of the work there and in our own county, closing with: "I regard the results of the recent examination in Ontario, Colton and Highland in our county as highly encouraging, for, while it does not settle conclusively the question of the increase of the parasite, or its effectiveness here, it nevertheless furnishes reasonable ground to hope that the day of our deliverance from the ravages of the black scale is near at hand."

ADDRESSING the Santa Cruz fruit growers on the 1st inst., Col. Philo Hersey said: "The usual spring demand for dried fruits did not come this year and the market is flat. There is absolutely no demand for peaches in the East, and the small lots on hand in various localities will probably go into cold storage soon. The prunes that are on the market in the East, however, are gradually being consumed, and possibly there will be a demand for more to supply the immediate needs of the market. 'The amount of prunes on hand at present is very small and will find a ready market this fall. California, and especially Santa Clara valley, has an advantage in keeping the fruit over the summer, for cold storage is not required and the fruit is in better condition after a season in the warehouse here than it is in cold storage in the East.'"

## The Coming Fruit Crops.

At the Yuba City meeting of the State Horticultural Society on May 31 a commendable effort was made to elicit information upon fruit prospects in the various regions. We give these reports in condensed form:

EZRA CROTZER, Red Bluff—Peaches, fair average crop all over county; apricots, about one-fourth crop; plums, heavy, except Kelsey's, which were light and have since suffered by high wind; almonds, fine crop; pears, very light—about one-fifth of crop; apples, very good; citrus fruit, outlook very favorable.

W. P. HAMMON, Butte county—Full crop of peaches; pears, very light—about one-third of a crop; apricots, less by 50 per cent.; almonds, good; French prunes, not half of last year; olives, an abundant crop.

HENRY WATTERS, Nevada City—Outlook not encouraging. Cherries, one-fourth of a crop; peaches, plums and prunes, very scarce; Bartlett pears and apples, light; small fruits, abundant.

B. F. WALTON, Sutter—Peach crop, universally good; pear crop, nominally nothing, and equally the case in apricots; prunes, light.

W. B. JESTER, Newcastle—Strawberries, heavy and fine—large second crop now ready; raspberries, large and fine and shipments heavy; apricots, very short, about 10 per cent.; cherries, marketed one-third of usual yield; peaches, promise largest crop ever sent from this district, and excellent quality; plums and prunes, short crop, say 60 to 75 per cent. of usual yield; pears, very short, say 10 per cent; grapes, at present in magnificent shape; oranges and lemons, bloomed and setting very full.

R. McGARVEY, Ukiah—Apple crop, abundant; peaches, failure; pears, about one-fourth crop; French prunes, one-third crop.

F. H. BUCK, Solano county—Reported 20 per cent of last year's crop of apricots; peach crop, excellent; Bartlett pear crop, about half; prune crop, about the same as last year; grape crop, excellent; nectarines, very good; cherries, were all marketed, and about one-fourth of a crop.

L. F. MOUTON, Colusa—Cherries, one-third crop; apricots, one-fourth crop; nectarines, three-fourths crop; prunes on young trees a failure, on old trees, one-half crop; Bartlett pears, one-fourth crop.

WM. BARRY, Niles—Peaches, full crop; apricots, pears and prunes, half crop; cherries, one-fourth crop; silver prunes, one-eighth crop. All peaches look well but Salways which have curled and dropped considerably.

PHILO HERSEY, San Jose—Apricots, pears and cherries, less than one-half crop; prune product will be four million pounds less than last year; peaches, a good average.

W. H. AIXEN, Wrights—Apples, fair crop except Newtown pippins; cherries and apricots, light; pears, small crop; peaches, good crop; plums, fair and prunes a good crop, up to average.

J. A. McCUNE, Watsonville—Pajaro valley fruit crops light; apples, two-thirds of average, Newtown pippins, very light and still dropping; apricots, one-quarter crop; cherries and French prunes, one-half; Bartlett pears probably one-quarter crop; peaches, light.

GEORGE C. ROEDING, Fresno—Pear crop very light; apricot crop fair, peach and nectarine, very good; almonds, prunes and plums, small acreage but good yield; olives bloomed freely and are setting well; all grapes, including Muscats, are heavily set and promise heavy crop.

R. H. McDONALD, Porterville—Prune crop very light, perhaps one-third; apricots about medium; peaches heavy and well advanced; Bartlett pears, small acreage but good crop; Muscat grapes setting well; all oranges but Navel heavily loaded; Navel have dropped too freely.

C. J. BERRY, Visalia—Apricots and prunes very light; peaches medium crop and pears about half of average crop; raisin grapes affected by coulure.

R. H. YOUNG, San Diego—Apple crop promises large, especially in Julian country; peaches and pears good; prunes fair; apricots one-half crop.

## That Eastern Weather.

A friend sends us an extract from a letter written from Flushing, N. Y., on May 25th, which brings a realizing sense of the disaster to horticulture which has been experienced:

This has been one of the most extraordinary springs ever known on the Atlantic coast and in New England. It is sixty-one years since such late frosts have occurred to blight every green thing, not only fruit, but all green crops. A farmer on the Jamaica road told me he had lost 9000 tomato plants in a single night. A whole immense crop lost in six hours! Our tulips were made nearly a failure this year by the awful heat of two weeks ago, which baked them, and by the heavy frost which followed and strangled out their lives, reducing them to a greenish jelly.

Since that frost has come the terrific heat which this week's telegrams describe. The Atlantic coast has had a succession of horticultural disasters ever since the great ruin by frost in Florida.

## Killing Morning Glory.

TO THE EDITOR:—You are right in advising a weed cutter for killing morning glory. I planted an orchard seven years ago last spring and parts of the land were covered with morning glory. I ran my weed cutter over the patches every Monday morning, from six to eight inches deep, from the first of April to November, which entirely killed it out. The next year fresh seed which was still in the ground sprouted, and the best would have been equally bad had I not started my weed cutter. It does not spread from the roots but comes from the seed, it being scattered by the plow.

Lodi, June 4.

B. F. LANGFORD

We are glad to have this testimony from Senator Langford. This is unquestionably the way to eradicate the plant. But another correspondent writes thus:

TO THE EDITOR:—Since reading Dr. Eshleman's communication on morning glory, I have dug again, like many times before, into my own patch of it in the hard and well-tramped croquet ground and in the rosebed adjoining. I find loose soil not the only kind in which it spreads. Its roots reach a foot deep, and if pigs do not go deeper than that they will not eradicate it. It is an insidious thing, showing its head from the hard, dry ground a number of feet from where it has previously put forth. As every piece of root and rootlet appears to grow, it would seem necessary to thoroughly pulverize and sift the soil to secure every germ liable to propagate—a remedy not more laborious at any rate than "boiling the ranch." As the pest yields readily to a liberal dose of salt, I must say that this is the only effectual remedy I know of besides the method proposed now and again, of keeping it thor-



oughly cut beneath the surface of the soil for two seasons, but even this latter remedy is more honored in theory than in actual results, as far as we can hear from those troubled with this vexatious weed.

C. W. DEARBORN.

Oakland, June 4.

The plant does of course spread from root and stem pieces as well as from seed, but it is not necessary to sift these out, though it would be of some help to do this if the constant cutting underground were kept up. If not, it would avail little to sift out what you can get that way. It would come again. It is not practicable to kill morning glory with salt unless it be on a croquet ground, because if you put on salt enough to kill the weed you kill the soil for any useful plant unless you have heavy rainfall and leachy soil, and then the salt might be washed out in a year or more. The salt remedy was tried in Haywards twenty years or more ago with cheap salt from the bay shore. It is not a practicable remedy, for the reason stated. Cut morning glory underground, and don't stop cutting. Never wait for a leaf to see the light.

But here we have the same doctrine spoken of in the light of

#### FORTY YEARS' EXPERIENCE WITH MORNING GLORY.

TO THE EDITOR:—In reply to Dr. Eshleman, I can only give a few experiments, tried during the past forty years, to eradicate the weed; but no one as yet has found a solution to cover the case. The doctor speaks of making movable fences and turning hogs in it. This plan has been tried, but will only keep it under control while feeding; it don't kill its vitality.

In early days, when it was only found in small patches, men have been kept working for days to dig out the pest, but if a single joint remains it takes root and multiplies. Covering it up with straw various feet is thickness and leaving it through the season will not smother it out. Salt brine has been used to some extent and has stopped its growth where it was light and not much in depth. Salt spread over the surface is good, if not used so as to be a detriment to the soil.

The only remedy to keep it within bounds is thoroughly working it with a weed cutter as often as once a week, or better every three days if the soil is damp. This, of course, requires constant labor and expense. The ground must be kept loose and not become baked. By thus keeping it cut off it will lose its vitality and naturally smother out. Weed cutters are of different sizes, made in V shape, some three feet to six feet in width, with four-inch blades, kept sharp, using one or two horses, according to size. One man can go over a large space in a day in vineyard or orchard.

The conclusion which I have drawn is to destroy its vitality by keeping it from the air and light: give it no breathing space and life will become extinct.

Geo. T. Rich.

Florin.

#### Rainfall and Temperature.

The following data for the week ending 5 A. M., June 5, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA<br>ATIONS | Total<br>Rainfall for the<br>Week | Total<br>Seasonal<br>Rain-<br>fall to Date | Total<br>Seasonal<br>Rain-<br>fall Last Year to<br>Same Date | Average<br>Seasonal Rain-<br>fall to Date | Maximum<br>Temperature<br>for the Week | Minimum<br>Temperature<br>for the Week |
|----------------------|-----------------------------------|--------------------------------------------|--------------------------------------------------------------|-------------------------------------------|----------------------------------------|----------------------------------------|
| Eureka               | .08                               | 49.97                                      | 52.22                                                        | 43.36                                     | 58                                     | 46                                     |
| Red Bluff            | 28.86                             | 19.70                                      | 25.14                                                        | 94                                        | 50                                     |                                        |
| Sacramento           | 24.11                             | 14.90                                      | 21.80                                                        | 92                                        | 50                                     |                                        |
| San Francisco        | 25.70                             | 18.31                                      | 24.18                                                        | 68                                        | 48                                     |                                        |
| Fresno               | 14.14                             | 8.17                                       | 10.95                                                        | 98                                        | 46                                     |                                        |
| Los Angeles          | 15.91                             | 6.73                                       | 20.02                                                        | 100                                       | 46                                     |                                        |
| San Diego            | 11.60                             | 4.19                                       | 10.77                                                        | 76                                        | 52                                     |                                        |
| Yuma                 | 2.97                              | 2.16                                       | 3.56                                                         | 108                                       | 52                                     |                                        |

#### Weather and Crops.

Report for the Week by the Director of the State Weather Service.

Director Barwick of the Weekly Weather and Crop Service summarizes as follows:

The average temperature for the week ending Monday, June 3d, was: For Eureka, 52; Fresno, 64; Independence, 58; Los Angeles, 62; Red Bluff, 66; Sacramento, 64; San Francisco, 56; San Luis Obispo, 52, and San Diego, 60.

As compared with the normal there was a heat deficiency as follows: Eureka, 2 degrees; Fresno, 8; Los Angeles, 4; Red Bluff, 5; Sacramento, San Francisco and San Diego, 3 degrees.

The total precipitation for the week was nothing at Los Angeles, Red Bluff, Sacramento and San Diego, a trace at Eureka and Fresno; .10 of an inch at San Francisco, and half of an inch at San Luis Obispo. As compared with the normal, a deficiency is reported at all points except San Francisco and San Luis Obispo where a slight excess is shown.

The continued cool weather in the great grain growing sections of the State has enhanced the value of late sown grain, causing it to fill out well with full plump kernels. Rust has done considerable damage to grain in the lower San Joaquin valley.

The weather during the week has been exceptionally cool except yesterday which gave an excess of heat over the normal. The sunshine and temperature were very beneficial to all growing and maturing crops. The mountain counties report very cold weather and in some heavy snowfall is also reported

being an unusual thing so late in the season even for our elevated regions.

#### Sacramento Valley.

TEHAMA (Red Bluff)—Exceptionally cool weather prevailed during the week up to Saturday, when decidedly warmer weather set in. These conditions greatly favored wheat, barley, rye and oats. Wheat is heading out well and an extra large crop on good land will be harvested. The high winds of Sunday, the 26th, knocked off considerable fruit, thus reducing this crop in the county. Haying is about over.

COLUSA—The light north winds were good for wheat that is threatened with rust. Hay making at full blast and crop good. Weather good for wheat, the indications being very favorable for a large crop.

YUBA—The weather being cool has been favorable for grain. The rivers are fast falling, and bottom lands are now about to be utilized.

SACRAMENTO (Union House)—Hay is almost all cut and the wheat and barley are ripening fast. Harvesting will commence in a few days on early barley. The late rain was good for late grain.

YOLO (Black's)—The prospects are excellent for a big yield of grapes in this vicinity.

SOLANO (Dixon)—The heavy rains of the 27th did some damage to hay in the fields, but did no damage to the growing grain. (Vacaville)—Several ranchers report that apricots are dropping quite heavily. On the hills, where immunity from frost was enjoyed, the apricots are dropping so heavily as to seriously menace the crop. The rain of the early part of the week did some damage to cherries, and also to the Pringle apricot, by causing them to split.

CONTRA COSTA—The rain injured some hay and the ripe cherries cracked, but the later varieties are not hurt; other fruit is in good condition.

#### Napa Valley.

NAPA (Napa City)—The rains of the fore part of the week were followed by high southwest winds, which caused everything to dry up well; hay but little, if any, damaged, and about all cut in this valley. Grain is doing well, as also fruits. The rain helped growing corn and young trees.

#### Sonoma Valley.

SONOMA (Sonoma)—The cut worm has made its appearance, but the extent of the damage can not be told at this time. The worm is a night worker and seems to make a clean sweep of the foliage as it travels along the rows. A number of hop men have destroyed the worms and thereby prevented all further hurt from them. Some hop yards have been damaged, but the injury is not at all serious, though the crop will be late. (Healdsburg)—Bartlett pears will not be over a fourth of a crop in the Russian river, Alexander or Dry creek valleys. Peaches are plentiful in some orchards and light in others. There is a very light yield of prunes in the Russian river valley, but fair in the Guerneville fruit belt.

#### San Joaquin Valley.

SAN JOAQUIN (Lodi)—Grain is ripening slowly. Corn, beans and melons are making a slow growth but a healthy one. The strong winds have done some damage to fruit by shaking it from the trees, and to the grape vines by breaking off the young shoots. Grapes are blossoming full.

STANISLAUS (Turlock)—The winds have blown considerable fruit from the trees, and also blown down some rye, which is lying quite flat, making it difficult to harvest. (Crow's Landing)—Grain ripening slow and the grain will be full and plump. Harvesting will begin about the 10th. The yield will be something like that of two years ago.

MERCED—Crops continue to improve. The prevailing cool weather is beneficial by giving the grain a chance to fill out. (Livingston)—The heavy winds are damaging slightly the rye crop by shattering it out and blowing it down. There is very few good wheat crops in this section, as crops that looked good two months ago are very poor now.

TULARE—The cool weather helps grain to fill out; grain harvest will be in full blast the coming week and the prospects are good for a bounteous yield. Hay crop large. Army worms gone. (Dinuba)—Whole fields of grain in this vicinity have been injured by rust. Many acres are a total failure. This state of affairs is all within the irrigated belt, but confined to those lands wherein hardpan lies near the surface. A fifty-acre vineyard east of town has been completely destroyed by the sphinx moth, they doing their work in six days. The worms also ate the apple tree leaves, but did not molest the other kinds.

#### Southern California.

SANTA BARBARA.—Unusually heavy northwest winds with showers in the mountains; weather very cool and generally favorable to maturing grain; some barley ready to cut.

VENTURA (Saticoy)—The high north winds of last Monday and Tuesday did great damage to corn and beans. In some sandy fields the blades and leaves are torn from the stock and in some places dirt and sand have completely covered them, which will necessitate replanting in several localities. Walnuts and other fruits have suffered somewhat, as the wind blew the fruit from the trees. (Fremontville)—On account of the high winds of the first part of the week, beans planted on sandy soil have been blown out, and a general replanting will have to be resorted to. Barley harvesting is well under way, and bean planting is almost over. The prospects for honey are very poor. Fruit trees hurt by wind to some extent. Highest and lowest temperatures, 81° and 46°. (Ventura)—The high winds did considerable damage to apricots in some orchards; also beans in exposed sandy soil. The worms have, in a few localities, been very destructive. The beekeepers report thousands of acres of sage brush so completely stripped of bloom as to ruin their prospects for honey for the season, an experience never before reported. Highest and lowest temperatures, 74° and 46°.

LOS ANGELES (Downey)—The nuts adjacent to Rivera promise to be very large and fine, especially the soft-shelled, but the yield will probably not amount to half of last year's output.

RIVERSIDE (Winchester)—Owing to foggy nights and cool weather, just at the right time of the season, late grain is filling out well. The grain will be plumper than anticipated, and, in some sections, farmers are reporting the heaviest and best crop they have had for years.

#### Coast Counties.

SAN BENITO (Hollister)—The rain during the early part of the week did considerable damage to hay. The grain and fruit crops promise a good yield.

WE are liable to encounter some little confusion from the use of the term "sweet peas." We have a most rapidly growing industry in the production of the seed of the lovely garden flower, the sweet pea, and the product is being shipped to the East and abroad. We also use the term sweet pea to distinguish the better varieties of vegetable peas from the inferior field peas. The canning of sweet peas in California is, therefore, something we do not do in one sense of the term, and something we hope largely to do in another. It is not uncommon to have confusion in terms, but it is not desirable.

## FRUIT MARKETING.

### Concerning Fruit Auctions.

Major Weinstock Tells of the Effort to Reform Them.

Paper read by MAJOR H. WEINSTOCK at the Yuba City Meeting

At the eighteenth Fruit Growers' Convention of the State of California, held under the auspices of the State Board of Horticulture, at Sacramento, commencing Tuesday, November 20th, and ending Friday, November 23d, 1894, one of the largest conventions of fruit growers ever held within this State, the question of the causes which led to the distressing results in fruit marketing in 1894 were thoroughly discussed. It was found that chief among the causes which led to the ruinous prices during the year 1894 and the preceding years, in the sale of fresh fruits in the markets of the East, were the existence of rival auction rooms in many of the Eastern cities. These rival auction rooms led, first to the division of the buyers in two or more auction houses at the same time, and thus forcing the fruit to come into competition with itself, while yet the property of the growers, leading to ruinous prices.

The convention, keenly realizing the importance of remedying this great evil, unanimously passed the following resolutions:

WHEREAS, Owing to certain causes, the shipping of fresh fruits to the markets of the East has more recently proven highly unprofitable; and whereas, a continuance of these causes must mean ruin to untold numbers of growers, and must seriously threaten the future of the fresh fruit industry of our State; and whereas, we have reason to believe that by united action on the part of commercial shippers, local associations, and individual growers shipping in carload lots and routing their own fruit, many of these causes may be promptly removed, and certain existing evils overcome; therefore, be it

Resolved, That without reference to any great popular movement to unite the fruit growers of the State in one organization for general purposes, but in addition and auxiliary to that movement, this convention recommends and earnestly requests the classes of growers and shippers above mentioned to proceed forthwith to organize themselves into a union to be known as the Fruit Growers and Shippers' Association of California; and be it further

Resolved, That the purposes of the proposed association shall be: (1) the establishment of a Bureau of Information to regulate distribution; (2) to establish one auction-room in each city; (3) to make such auction-rooms open and free to all buyers; (4) to do all such other things as may be conducive to the best interests of the fresh fruit industry of California; and be it further

Resolved, That the president of this convention be requested to appoint a committee of five, which shall represent all the above classes of shippers, for the purpose of taking steps to carry the above resolution into effect; and be it further

Resolved, That the California Fruit Exchange, as it proceeds in the work of organization, be requested to make the importance of maintaining such association very prominent, and to impress upon all growers the necessity of strongly supporting it in all ways; and be it further

Resolved, That the members of this convention hereby pledge themselves to give such association, when formed, our continuous and hearty support.

In accordance with the expressed wish of the State convention, the committee appointed, of which I was made a member, met at an early date and thoroughly discussed the resolutions adopted, and reached the conclusion that the wishes expressed by the convention were not alone most desirable in the interests of the fruit growers of the State, but were also entirely practicable. All large growers and shippers, including such concerns as Porter Bros. Company, the Earl Fruit Company, and the National Fruit Association, expressed themselves as heartily in favor of this and every other movement that would be in the direction of furthering the interests of the California grower, and pledged their support to the proposed association.

With a view of carrying into effect the resolutions adopted by the November convention, the committee issued a call for a convention of shippers, and growers shipping in carload lots, to meet in San Francisco at the rooms of the State Horticultural Society, on February 18th. At this convention there were present representatives of Porter Bros. Co.; Earl Fruit Company; Co-operative Fruit Co., Newcastle; Florin Fruit Growers' Association; Orange Vale Colonization Company; Wilson & Son, Newcastle; Sutter County Fruit Growers' Association; The National Fruit Association; California Fruit Association, Vacaville; The Anderson Fruit Company; Mount Shasta Fruit Association; Suisun Valley Fruit Union; Santa Cruz Mountain Exchange; Niles Fruit Growers' Association; and the following individual growers: Frank H. Buck, Vacaville; A. T. Hatch, Suisun; Henry Ambrust, Stockton; L. W. Buck, Vacaville; H. M. La Rue, Sacramento.

After a full discussion of the aims and purposes of the proposed Association, all who were present favored the establishing of the proposed organization and pledged their support to the same. The organization was then and there formed, and Constitution and By-laws adopted, and the following Directors elected: N. R. Salsbury, of Porter Bros. Company; E. T. Earl, of Earl Fruit Company; J. Z. Anderson, of the Anderson Fruit Company; Frank H. Buck, Vacaville; J. D. Mathews, of the Newcastle Co-operative Fruit Company; H. B. Stabler, of the Sutter County Fruit Growers' Association; H. Weinstock, of the Orange Vale Colonization Company, Sacramento.

The Directors met immediately after the adjournment of the Convention and elected officers, and fixed a date for meeting, at which the details for the



carrying out of the resolution adopted at the November Convention could be agreed upon. Such meeting of Directors took place on May 10th, at which, in accordance with the expressed wishes of the fruit-growers, a union auction room was selected in Chicago and also in New York, the two principal markets.

In the meanwhile the large shipping concerns had proven their good faith in the matter by unconditionally becoming members of the Association, except the National Fruit Association, whose membership was frequently solicited in vain, and who are not members even unto this day, in spite of their frequently expressed approval of the aims and purposes of the Association. The Board of Directors having determined in favor of the Northwestern R. R. terminal as the Chicago salesroom, and the West Shore R. R. terminal as the New York salesroom, the Secretary was instructed to notify the officials of those roads of the conclusion reached. The Secretary was also instructed to notify the receivers of California fruits at these various points, of the action of the Board; to send each a copy of the By-laws, which explained that all California fruits belonging to the members of the Association must be sold in one room in each city, which room shall be free and open to all buyers. Since then matters have been satisfactorily arranged in Chicago for all sales of California fruits to be conducted under one roof in a room free and open to all buyers. So far as the Chicago market is concerned, the wishes of the growers are being carried into effect; there is also every probability that satisfactory arrangements will be made in Boston and in other markets for California fruit to be sold under one roof when sold by auction. In the City of New York, however, the conditions are quite different, there having been some doubt expressed at a meeting of the Directors as to whether the two auctioneers handling California fruits in New York could be brought together to transact business under one roof, and the executive officers of the Association having received no word up to the 25th as to the New York situation, I, as President, wired the following message to Sgobel & Day, who are representatives of the National Fruit Association in New York, and who employ Brown & Seecomb as their auctioneers: "Please ascertain if it has been arranged that Goodsell and Brown & Seecomb are to sell on West Shore pier." To which I received the following reply: "No, because Porter absolutely decides they must also sell every day before National entirely contrary to understanding at meeting, therefore National Ruhlman Jeroloman have decided Erie."

This meant that the National, together with some of the small receivers, proposed to establish a rival auction house in New York, thus defeating the wishes of the growers expressed in State Convention, and thus perpetuating one of the gravest evils of the past. Mr. Salsbury, the California representative of Porter Bros. Co., being out of the city, I wired Sgobel & Day as follows: "Will call meeting of directors for Saturday on New York situation; would strongly advise that no positive action be taken at your end until after such meeting." Immediately upon Mr. Salsbury's return to the city, I called on him in reference to the telegram received from Sgobel & Day. After going over the situation thoroughly, I found a meeting of the directors unnecessary, since the issue that had arisen as to the rotation of sales in the New York auction house, which was the only point at issue, could be immediately adjusted by the Nationals becoming members. This would at once entitle them to all the privileges enjoyed by the other members. I accordingly telegraphed Sgobel & Day as follows. "I find that rotation of sales can be satisfactorily adjusted by National becoming member. Salsbury cheerfully concedes that you are then entitled to equal rights. I advise membership to be taken so matter can be adjusted at once." To which the following answer was received: "Sincerely regret affair; all arrangements completed Saturday and Monday; cannot change now; wrote you fully to-day."

This is the situation at present. To-day, in spite of the expressed wishes of the fruit growers of California, there are two rival auction houses in the city of New York where one grower's fruit is being pitted against another's, to the injury of both, and where the buyers, in place of being brought together under one roof for the benefit of the grower, are divided in two houses, thereby lowering the possible price to be received by the grower. There is no argument which can be conceived that will justify this condition as being necessary or unavoidable; and if it is permitted to continue, it can be at the expense only of the growers, and none but the growers themselves will be to blame. It may be held by the representatives of the National Fruit Association that the fault is not theirs; that, even though not members of the association, they were willing to sell in a room approved by the directors, but that Mr. Porter or somebody else had refused to give them fair terms. This point, however, will not hold, for the reason that the association cannot be held responsible for the private differences between Mr. Horace Day, of Sgobel & Day, and any one or more members of our association. The Fruit Growers' Association should be held responsible, and is willing to be held re-

sponsible, for any and all of its official acts. Had the Nationals, in common with other large shippers, shown their willingness to comply with the wishes of the growers by becoming members of the association; and had the association, through its officers, refused to place them on an even footing with the other members, the National Association would have been entirely justified in withdrawing from the association and establishing, not from choice, but from necessity, a rival auction room, and doubtless their action would have been commended and applauded by all believers in "fair play."

The converse, however, is true; the Nationals have never shown a willingness to become members; they have never submitted any grievance to the proper officers of the association, and it would seem as if they had established the rival auction house at New York, not from necessity, but from choice, and regardless of the wishes and the interests of the fruit growers of California.

That their grievance, if any, could have been readily and satisfactorily adjusted is evidenced by the fact that after accidentally discovering—through the medium of the telegraphic messages quoted above—that a difference existed in New York between Mr. Day and Mr. Porter regarding the rotation of sales, it took but a brief half hour to gather from all parties the exact position assumed by each, and to reach an understanding that enabled me to point out to the Nationals and to Mr. Day that the settlement and adjustment of all differences could be made immediately by the Nationals complying with the expressed wishes of the fruit growers of California and joining the association.

I place these facts before the fruit growers of the State believing that, as chairman of the committee appointed by the fruit growers' convention of November last to carry out their wishes in the direction of devising improved methods for marketing fresh fruits, it is my duty to apprise you of the situation and to urge upon you that such immediate action be taken as will best lead to the desired end of establishing one auction room only at each Eastern auction point, so that the best results may be obtained for the growers in the marketing of fresh fruits.

#### Grading and Packing Fruit to Meet the Wants of the Trade.

By B. F. WALTON, at Yuba City meeting of the State Horticultural Society.

The development of all important and profitable industries has been accomplished by successive steps. The promoters have invariably groped their way along with more or less uncertainty, learning by experience, improving by the mistakes as well as the successes of the past, until easy, practical and successful methods of procedure have been brought into use. This has been followed by a degree of prosperity proportionate to the demands of the times for the product of such industry and the ability to supply them. Those of us who are now engaged in the production of fruit in California are called upon to create largely, as well as supply the demand for our products, and it is with this view in mind that this paper has been prepared for your consideration.

The present condition is before us, and while to some the situation affords nothing but discouragements, nearly all who have made a careful study of the possibilities of California to produce superior fruit sufficient to supply the demands of all available markets, believe that, with a proper understanding and knowledge of the business, the laws of trade and the demand of the times, we can develop a market for all the superior fruit we can produce in some of its varied forms, even if every available acre of fruit land be planted to orchard. To do this we must face the situation and understand that we are to rely upon our own efforts for success, instead of chance and the work of others. Taking all things into consideration, our great distance from the centers of population, the cost of transportation and our natural advantages for the production of a superior article of dried or cured fruit, our efforts can at present be directed with the assurance of the most practical results in developing and extending the market for our cured fruits. To do this successfully we must be guided by the experience and adopt the practices of other successful manufacturers, and so arrange and classify our products that each purchaser may secure the identical commodity he orders in the most convenient form to meet his requirements without danger of adulteration or deception. The value of any kind of fruit in the markets of the world depends largely or is mainly influenced by its size and appearance. Other things being equal, the greater and more uniform the size the more money the given grade will bring. The soil and climate of California enable the average fruit-grower to produce a very large proportion of his fruit of the more valuable sizes, but so far the attention of few, comparatively, has been called to the importance of a thorough and uniform system of grading as one of the most important steps in the preparation of all kinds of fruit for market. With fresh and canned fruit great advances have been made and uniform

standards are becoming quite general and acceptable to the trade. This adds to facilitate business and promote the production of superior fruit. It also relieves the grower of the uncertainty and anxiety incident to marketing his product, as a strict compliance with the established standards of grading removes the danger and annoyance of rejection. In extending the system to include all kinds of dried fruit, both growers and dealers have been very slow to appreciate or understand the importance of adopting uniform standards and providing authentic types for the various grades. With raisins and prunes considerable has been done to conform to the custom of the countries whose products supplied our markets previous to our producing the same in commercial quantities. Machinery has recently been brought into use to do much of the work of grading, at a nominal cost, where large quantities of fruit are brought under one management. Experiments have also been made with all other kinds of dried fruit, resulting in the conclusion that each kind can be graded as to size in its cured state by machinery with the same degree of accuracy as prunes and raisins are now graded, at a nominal cost, with equally good results.

The enforcement of a thorough system of grading as a preparation of dried fruit for market, is one of the most, if not the most, important improvement now demanded to increase the profit of fruit production and make the demand constantly exceed the supply. Well graded fruit can be pushed in the various markets, and does not come in competition with other grades, as there is a distinct class of customers for each.

Forty to fifty prunes sold last season for nearly double the price of the four sizes in the same market, and illustrates the advantage of systematic grading, which needs only to be extended to produce the same results with every other kind of fruit. The attention of growers was last year very forcibly called to the importance not only of grading fruit but of producing as large a percentage as possible of the better grades and larger sizes, which sold readily at fancy prices, while the standard grades moved slowly at prices that returned little if nothing above cost of production; hence greater pains are now being taken in pruning, thinning and cultivating to produce large-sized fruit. This is a practical way of extending the market and avoiding overproduction. What has been done in this direction will apply to every kind of fruit when systematically graded, and the prompt support of growers in putting into operation such a system at once will go far towards solving many of the perplexing problems, and removing much of the uncertainty, that now surrounds the fruit industry. Having settled upon a practical system of grading as a part of the preparation of cured fruit for market, packing the same next claims our attention.

To fix responsibility and enable the buyer and seller to understand each other, manufacturers have generally adopted convenient, uniform and attractive packages, with appropriate labels and trade marks, for their goods, to prevent fraud or imposition. This enables the consumer to trace any defect or false representation to where it belongs and insures good faith on the part of the manufacturer or packer. This universal custom, so long in use and so acceptable to the trade, cannot be ignored by fruit growers. It will prove to our advantage to adopt the methods and conform to the customs so successful in other lines, and at once adopt convenient and uniform packages for at least all the best grades of our dried fruit, so they can go to the consumer in original packages with the assurance that they are just what the label or brand represents them to be.

Individual growers in several instances have made a marked success in creating a demand for their well-cured, uniform and honestly packed fruits, the demand for which will soon outgrow their means of supply, and less desirable fruit supplied the demand will tend to limit rather than increase consumption.

These successful experiments have led up to a demand for a general system of grading and packing, which is now being recognized by the more advanced fruit growers and dealers and calls for prompt and united action on the part of all who are laboring for the success of the fruit industry in this State.

In preparing cured fruit for market, to insure the most satisfactory results, all fruit should be thoroughly ripe before gathering for the dryer; poor or imperfectly ripened fruit never makes choice dried fruit. It should be graded by hand as to size, to insure uniformity in drying; smoothly cut, if cut at all, to avoid ragged edges; carefully bleached and dried, then taken to the warehouse, passed through an effective grader and each grade placed in its appropriate bin, where it is to remain until sold, when each grade should be nicely packed and branded with the appropriate label generally adopted for it. To make these successive steps practical among ordinary or small fruit growers, association and organization become at once desirable and a real necessity. From the experience of the past four years the co-operative plan of curing and packing fruit has proven most satisfactory to growers and can be greatly extended, as it brings



all the advantages of machinery, warehouse and other appliances possessed by the most extensive orchardist within reach and available to the smallest grower. It is strongly recommended as the most effective means to secure satisfactory returns for all our cured products. It materially reduces the cost of production and at the same time tends to greater uniformity and superiority of quality and gives to the average grower a much wider and varied knowledge of his business.

## HORTICULTURE.

### Best Varieties of Fruit to Grow for Profit.

By W P HAMMON at Yuba City meeting of State Horticultural Society.

In dealing with this subject, it must be presumed that fruit growing in California is generally profitable. That, at least, is the banner held aloft for the contemplative planter of trees. We are led to believe that there is no other like area of country on the face of the earth so favored for the perfect development of fruits of so great a variety as California affords. There can be seen in some of her protected vales, on her gentle slopes, and in her fertile valleys, seemingly perfectly at home, all of the fruits of the temperate zone, everything that will flourish north of us, nearly all of the semi-tropical fruits and many from the tropics, flourishing in the highest state of perfection.

With the almost endless list of varieties of every class of fruits of distinction indigenous to three-fourths of the earth's surface before us to select from, to satisfy our fancies, our desire for excellence, and admiration for the novel and beautiful, is it a wonder that we, too often, in making our selection of what to plant, allow our ecstasies to overshadow our better judgment, and neglect investigation of what might succeed best in our particular soil, climate and location? What to plant, and where to plant it, should go hand in hand. With a view to profitable fruit culture, they are particularly essential to each other.

How often do we hear it said, by practical fruit growers, too, in bemoaning their misfortunes and ill success: "When I planted this orchard, if I had planted this, that or the other variety or class of fruits, I would have prospered from the first crop of my orchard instead of suffering from frequent failures of crops and continually groping in dread uncertainty." He had made a serious mistake in the selecting of the fruits to plant and failed to heed the necessity of studying what was best adapted to his particular soil and conditions.

Now, before attempting to suggest what might be best to plant, it might be well to suggest a few things that orchardists should not do:

Don't plant indiscriminately, because all fruits are not universally successful in California.

Don't follow the past season's market reports, and plant only those sorts that are quoted as bringing the highest price, because you will surely be disappointed in after years if you do.

Don't follow some particular phenomenal yield of a tree thirty years old, because you may not live that long.

Don't plant anything that is a *tree* just because it is cheap, with the intention of selling your place, because purchasers may be difficult to find.

Don't try to follow everybody's advice, because, if you do your duty by yourself, your judgment will be best for you to follow.

And when you have planted an orchard don't neglect it, because fruit trees will respond to a generous and judicious treatment as readily and as bountifully as any other form of life in existence.

Surrounded as we are on all sides, throughout the entire length and breadth of our great State, by thousands of acres of bearing orchards and by thousands upon thousands of acres more not yet in bearing, in which can be found all the varieties of fruits of any merit known to our most learned pomologists—when we reflect over the very few years' duration of fruit-growing in California and the wonderful advance made within the past decade, who would attempt to predict the possibilities before us within another ten years, and who would presume so much as to point out the particular varieties that might be the most profitable to plant now?

As to the future of fruit-growing in California and as to what we should plant now with a view to the greatest profit, much depends upon the management of that which is already planted. It will be the safest policy to confine ourselves closely to legitimate lines and strict business methods; we must learn to be satisfied with a good profit, even in growing fruit. There has been an era of too much speculation in our fruit lands and orchards for the general good and profit of the business, and yet, during the most trying circumstances of the past two years, which were encumbered with more adverse conditions than any other like period of time in the history of the business, the developed orchards in California, where planted with understanding and managed in a business-like manner, have paid from \$50 to \$100 per acre net to their owners. The orchard has done its full duty; if the proprietor has not done

as well by himself he must place the blame where it belongs. It certainly does not belong to the business.

In recommending varieties to plant we can at best only generalize. Great care should be exercised in the selection of land for an orchard, especially if the contemplative planter favors some special line of fruits. Only those varieties which give assurance of bountiful and continual crops should be planted. When one desires to improve land already in possession, the character of soil to be planted in should be thoroughly considered, also the climatic influences in that vicinity; and by planting only those classes and varieties of fruits best adapted to the soil and location, the most profitable fruits one can grow will be the result.

Successful cropping is the main feature in growing fruit for profit. It does not matter much whether it be apples, pears, cherries, peaches, plums, prunes, apricots, almonds, and right on down the list—all are profitable when they attain a degree of perfection that would be considered in the markets as No. 1.

Take an average of the crop and prices for the past ten years and it would be difficult to determine which of the various classes of fruit have been the most profitable, and we may reasonably expect this to hold good another ten years.

In this vicinity, and along the Feather river bottom lands to Oroville, the orchardist has learned that the peach thrives perhaps the best, and is the surest crop, of all the fruits grown in this region. We would not want it understood by this statement, however, that other fruits are not profitable with us, when, in fact, there are few places, if any, in California where pears, plums, prunes, almonds, nectarines, apricots and early apples can be more successfully grown. Peaches are simply *par excellence*, always to be depended upon for yield and excellent of quality.

In peaches those varieties most liable to curl-leaf will be affected somewhat in a bad year. But we have promise that there is a remedy, which will be available in the near future, that will dispel all fears of curl-leaf from the orchardist's mind.

The varieties of peaches most in favor here are yellow freestones—those which produce the finest quality of dried fruit. These are generally the best for canning, and ship well also. I would name Foster, Mary's Choice, Muir, Wheatland, Late Crawford, Susquahanna, Lovell, Picquet's Late and Salway as the leading kinds. The Lovell seems to rank first with canners, and the Decker should not be overlooked as an excellent shipper, and dries fairly well also. Cling peaches seem to be neglected for some reason the past two years, and many have worked their trees over. It may not be the most profitable to undertake to change our trees over, with all the changes and demands of an unstable market. Sellers' Cling, Runyon's Cling, Nichol's Cling, McDevitt's Cling and Henrietta Clings are all standard varieties, are excellent growers, good bearers, and profitable for shipping. Canners want them, and they all dry heavily. The Alexander, Hale's Early, Yellow St. John and Tuscan Cling always have their place for early shipping. The Yellow St. John, where it attains good size, is profitable for drying, and is the first dried peach in the market. There are many other varieties of peaches that may be profitable to grow and desirable for special purposes. Those named, however, can be depended upon one year with another for profit.

**Pears.**—The Bartlett still holds first rank for an all around market pear, and has been unquestionably the most profitable variety to grow. But there are other valuable varieties that should not be neglected, particularly the late fall and winter sorts, such as Beurre Clairgeau, Beurre Hardy, Easter Beurre, Doyenne du Comice, Winter Sickle, P. Barry, Winter Nelis and Glou Morcou. All will continue to be popular in the market, and all are profitable where they will properly mature.

**Apples.**—Early apples do exceedingly well all along our rivers in the Sacramento valley, and our orchards furnish the first apples seen in the Eastern markets, and usually pay well. The Red Astrachan, White Astrachan, Red June, Early Harvest, Maiden Blush, Gravenstein and Alexander are most in favor with growers in our immediate vicinity. In the valley we cannot hope to produce any of the later varieties profitably. The trees seem to grow strong and thrifty, but the quality of the fruit is inferior as compared with the same varieties grown at an altitude of from 1,200 to 3,000 feet above the sea level. Our foothills, from Siskiyou to San Diego, produce apples equal, in quality and appearance, to the best, and there is no reason why California should not be a heavy exporter of fine apples, at a handsome profit to the grower.

**Plums.**—Nearly all varieties of plums do exceedingly well in California. We, in Butte county, favor most the shipping varieties—Tragedy prune first of all. Clyman plum is also in great favor; several varieties of the Japanese type of plums promise to be very profitable, particularly Burbank and Abundance. There are several new varieties not yet sufficiently tested to determine their real value.

**Apricots.**—Apricots usually are a good crop in this section. The Royal, Blenheim and Peach are, per-

haps, the safest varieties for us to tie to. However, some seasons, St. Ambrose, Hemskirke and Montgamet are a heavy crop.

**Almonds.**—Almonds have been largely planted in this vicinity, and are usually a good crop. The varieties which do especially well here are I. X. L., Nonpareil, Ne Plus Ultra, Luelling Prolific, La Prima and Drakes' Seedling. California Paper Shell, where planted alternating in rows with other varieties, does fairly well also. We would recommend planting all varieties of almonds in alternating rows; for example, a row of I. X. L., then a row of Nonpareil, and so on with whatever varieties are to be planted.

**Prunes.**—The French prune, "Petite de Agen," is still king of prunes in California, but there may be other varieties better suited to certain classes of trade than the Petite. The Robe de Sergeant is continually gaining ground, and is prized most where best known. Its dark, glossy appearance, uniform good size, and its smooth, luscious flavor commend it to many in preference to the Petite. There are several other varieties of large size being pushed forward, of which there is not yet enough known to give them rank with others.

After all that has been said and written on fruit culture in California, and with all the advantages of soil and climate at our command, success depends largely upon the man, and surely awaits the man who is willing to go about the planting of an orchard with the same good business judgment that would be expected to be necessary to success in any other line of industry.

In the beginning, there is much to be considered. Don't be in a hurry in making your selection of land; take plenty of time for comparison; be positive of what will succeed with you, and do not plant until you can be. You are laying the foundation for a business of twenty-five to thirty years duration; whether you manage it or not, you cannot afford to start wrong.

Do not hesitate to plant any of the standard varieties of fruits that you can have reasonable assurance will succeed with you. You cannot afford to experiment in the planting of an orchard. It is well enough, and necessary, to give some time and place to testing new varieties, but do not undertake to make a business of it. Our State experimental stations can better afford that. There is much valuable information in our State horticultural reports; also in our leading horticultural journals. Every fruit grower should have a copy of "California Fruits and How to Grow Them," and study it closely; and yet, much of the more practical knowledge is to be obtained in the field by coming in direct contact with the different stages of growth and general conditions, studying causes and effects. I was once told by a man of experience that the "price of fruit was eternal vigilance," and the appearance of his place would indicate he was a prosperous man, and I have always cherished a deep respect for that old gentleman for his candid suggestion.

Plant your orchard for a purpose, and keep that purpose ever in mind; plant such varieties as will best serve it, and go where they will attain the highest degree of perfection. There are such places in California. Do the best we can, and still there will be too many who are willing to produce trashy fruit.

## THE DAIRY.

### The Cow Test at the State Fair.

TO THE EDITOR:—"Working Dairyman" hits the nail on the head when he says that, by not allowing graded cows to compete for the butter prizes at the State Fair, some of our best cows will be debarred the privilege of a public test. He clinches the nail, too, by stating facts in proof of what has been accomplished by some cows of unknown breeding over and above what is known to have been produced under like circumstances by any breed of cows claiming to be pure-bred. Now, as to the latter class of cows being "too aristocratic to compete with common cows," I do not think, speaking for the Shorthorn breed, that there are any grounds for the consideration of a suggestion of that kind. Most of the once aristocratic Shorthorn families have had the greater part of their milking qualities, as well as a good deal of something else, bred away from them, so that those who want real milking Shorthorn cows must and do look to such herds—and of such there are very few—as have been bred for that purpose, or, more properly speaking, for milk and beef, by which method the most useful class of cattle for the general farmer is produced, and from this class comes the general-purpose cow, so much in request by the small farmers of our day.

While it is true that a few of the best butter records have been made by cows of unknown breeding, the best average of records, and by far the most premiums for the production of milk and butter, have been won by cows of the Shorthorn breed at the London dairy shows, covering a series of years.



Still, many of these same Shorthorn cows have no recorded pedigrees, or, at most, short ones, such as would be classed as grades in this country. Then again, thus far, at all the tests held at the California State Fair for the last four years the Shorthorn cow has held her own—has taken all the premiums, in fact, with the exception of the one taken by that extraordinary cow, Lady Woods, last year. As is well known to the readers of the *RURAL* who are interested in dairy matters, this cow gave 7.879 pounds of butter fat in three days, equal to 9½ pounds of marketable butter—a feat which may not be again equalled at our State Fair for years to come.

In regard to the standard for quantity of butter fat to be produced by each cow to enable it to remain in the coming test after the second day, I do not consider it too high, though, if that for five-year-old cows had been in force in 1894, five of the seven cows that were tested would have been ruled out. Then, as to heifers, there ought to be no difficulty in the way of having two-year-old heifers produce .80 pounds of butter fat a day, or the equivalent of one pound of butter, yet of the two two-year-old heifers tested last year, only one came up to that standard, and she was two years and eleven months old. A heifer of that age might be required to produce one pound of butter fat a day this year if in competition with one only twenty-four months old.

If graded cows were to be allowed to compete in the test as a class by themselves we could well merge the four and five-year-old cows into one class and thus make room for the grades, as suggested by Working Dairyman. The difference in the quantity of milk and butter given by the same cow at four and five years old is generally so small that it is practically not worth taking into consideration. We know that, as a rule, cows do improve slowly up to the time they are five or six years old, but we also know that some cows are as good at three years old as they ever afterwards become, and I have known extra good and promising heifers to give about as much milk after the first calf as they ever did afterwards, so that we can lay down no certain rule in such a case. I had one four-year-old cow in the test of 1893 that gave almost exactly the same weight of milk as she did as a five-year-old in 1894; the difference was less than one pound of milk for the three days, the greater quantity being given in her four-year-old test. Plenty of instances of this kind could no doubt be quoted from the records of public dairy tests, but for the present, it will be sufficient to remind your readers that the best dairy cow of any age or breed that went through all the three tests at the World's Fair in 1893 was under five years old. Yet I agree with Working Dairyman when he says "that the sliding scale system in regard to comparative ages and products appears to be reasonably and fairly adjusted;" and if that system is finally carried out, it is theoretically, I presume, as good as we can have it.

There was some correspondence on this subject carried on in your columns several months ago, when I suggested that there should be some allowance made for the difference in time of calving, after the first month, as is practiced at the London Dairy Show. I am still in favor of that plan, because it agrees with what occurs in practice. For instance, we know that a cow that gives 60 pounds of milk a day for the first month after calving is a good cow if she gives 57 pounds at the end of the second month, 54 pounds at the end of the third and 51 pounds at the end of the fourth month; or take a cow that begins with 50 pounds a day and gives 41 pounds at the end of the fourth month, so that by carrying out this ratio we find the cows giving, at the end of six months, 45 pounds, and 35 pounds of milk a day, respectively. That would be similar to the rule of allowance at the above-named show, which is one pound of milk a day for every ten days after the first twenty. Now, we know in practice that that is about what good cows will do, and if they are not good cows they will not hold out so well and therefore in a test they would have proportionately less milk to their credit. We sometimes find that a cow giving 35 pounds of milk a day, at the end of six months, is a better cow than one that gives 50 pounds a day just after calving, because the latter has not the staying qualities required in a profitable dairy cow. It is easy to see that, by refusing to make some such allowance, many of our best cows must stop at home, where their owners will wisely keep them, rather than they should have them come into an unfair competition with newly calved cows. I have in mind the report of cows tested at one of the Eastern State Fairs in 1892, in which it was shown that one cow that had been in milk 202 days gave about the same quantity of milk and more butter fat than either one of two others that had been in milk less than one-third of the time. The first-named cow was beat by one that had been milking less than a month, which gave 11 pounds more milk a day, but less than one-third of a pound of butter fat more for the two days' test, being at the rate of about 2½ ounces of butter a day more than the cow that had been in milk more than six months, which was undoubtedly the best of the four cows, considering the length of time she had been in milk and for which time, in a case of this kind, I am contending that some allowance ought to be made.

It is easy to say that people should have their best

cows calving just at the right time for them to test to the best advantage. That is all well enough in theory. In practice it is found that we cannot always have these things to order, and that our best cows don't always calve just at the time we would like to have them do so.

ROBT. ASHBURNER.

Baden, San Mateo Co., May 28, 1895.

#### Yearling Cows in the State Fair Butter Test.

TO THE EDITOR:—I have just read Secretary E. F. Smith's answer to "A Working Dairyman" in the *PACIFIC RURAL PRESS* and want to put in my queries, which I hope he will kindly answer:

Will the cow under two years old be given the advantage of the .072 ounce in the butter test that the cow two years old receives from her elders? For instance, if the cow is fifteen months old or any age less than two years old, can she have the same advantage of the handicap as the two and three-year-old cows have over their elders?

If she is fifteen months old there is a difference of nine months or 270 days between her and the two-year-old cow, which multiplied by .072 gives 19.440 ounces or 1.215 pounds of butter, and which divided by .80 equals 1.50 pounds of butter fat that the two-year-old cow would have to give over the fifteen-months-old cow in the seven days' test.

Now, I do not know if you allow a yearling cow in the test, but I cannot think it out of place also to give her the same advantage over her elders that two, three or four-year-old cows get over their elders.

Are we to understand that the downward limit is set at two years old?

You have set no limit of age above two years old, but have handicapped each class with the .072 per day for excess in age. May we handicap a two-year-old cow? Can a fifteen-months-old cow be allowed to give proportionately less milk than the two-year-old cow? On what basis would said fifteen-months-old cow be dropped from the contest? Two-year-old cows are required to give twenty pounds of milk per day, and older cows proportionately larger quantities. If the fifteen-months-old cow gives twelve pounds of milk will she be dropped from the contest? Also, if she gives .80 pounds of butter?

Further, if any cow gives eighteen pounds of milk and 1.50 pounds of butter in a day will she be dropped from the contest? I do not mean to split hairs, but these are conditions that we are all interested in.

San Dimas, Cal.

A DAIRY WOMAN.

REPLY BY SECRETARY SMITH.

TO THE EDITOR:—In reply to "A Dairy Woman" I would say that *all* cows under two years old will be rated as two-year-old cows and will not receive any advantages over cows that are two years old; in other words, all cows under two years old that may be entered in the test will be classed as two-year-old cows.

EDWIN F. SMITH, Sec'y.

Sacramento, May 28th.

#### THE POULTRY YARD.

##### A Contra Costa Poultryman's Ways.

J. H. Holt, of Lafayette, Contra Costa county, sends to the *Poultry Keeper* his system of poultry management and his results, as follows:

My stock is the Black Minorca and Houdans. Since last November I have fed them on alfalfa, up to about January 15th. Since that time I have cut grass, weeds and mustard stalks, which I run through a fodder cutter, cutting it one-quarter of an inch long. For 150 fowls I use ten pounds of bran, two pounds of oilcake meal, one pound of cocoanut meal daily, which costs as follows: Bran, 10 cents; oilcake meal, 3½ cents; cocoanut meal, 1 cent; total, 15 cents for the 150 hens for one day. When feeding alfalfa I only used 5 pounds of bran, 5 cents; about 8 pounds of hay, 4 cents; feeding perhaps 8 pounds of corn, 8 cents; total, 17 cents.

But what I thought more interesting is my present mode of feeding. I feed twenty-five gallons of cut green stuff, which costs nothing but the labor, as I have to mow my lawn before I can plow it; then I give bran, etc., as noted. I have not had a sick fowl for two years, and none ever looked finer than ours at the present time, and they are constantly increasing in egg production, giving yesterday eighty-six eggs. We have no mites in our houses, using crude petroleum on the perches and a good supply of ashes under them. My neighbor uses a great deal of wheat middlings, etc., and often has sick fowls, while we have none. Last season, when he was selling his eggs for eleven cents, I was getting seventeen cents; he sold here and I sent my eggs to the city, always getting about quotations, as my eggs are all of one kind, while his eggs are from common mixed stock, and this should be a consideration with all who go into the business. By all means use thoroughbreds and the best.

I will add that from this time I shall vary the feed a little, giving less grass and some wheat instead. Every one must use his or her own judgment in

these matters, but I have found that hens fed as above are perfectly healthy and could not look better, and mine lay better than when using feed that cost me three times as much heretofore.

#### Scaly Legs.

The cause is a minute parasite which gets under the scales of the leg and does its devastating work in a manner similar to the insect that causes mange on the horse. They not only cause great inconvenience to the fowl by keeping up a constant irritation, but as they increase they gradually undermine the health of the bird. Besides, if not disposed of, they will spread to other members of the flock and will finally become so numerous that you will with great difficulty rid your premises of them at all.

*Remedy.*—Take coal oil and lard, equal parts, with which put a few drops of carbolic acid. Wash the legs thoroughly with soap and water, rub dry and then rub the ointment well onto the legs, being careful to get it worked well in under all the scales. If the trouble is not of long standing three or four applications ought to cure them, but you should keep it up every other night until you can rub the scales off with your hands and the legs become smooth again. If it is a valuable specimen and you wish to bring the legs back to their natural condition, anoint them occasionally with vaseline after the scales come off. This will make them as smooth and bright as before.

#### SHEEP AND WOOL.

##### Hold On to the Merino.

It will please many California flock owners to be advised to hold on to the Merino blood, for they have it already, and its adaptation to California conditions is notable. The *American Sheep Breeder's* views will therefore be acceptable to many of our readers. It holds that the worst mistake that a shepherd can make is to sacrifice a flock of good fine-wool sheep. The Merino may be under a cloud for a time, but by and by the clouds will roll by and show the glorious sunshine they have obscured for a time. The intrinsic value of fine wool is, like the bright sunshine, always desirable, and possessing the highest merit, and always existing, although at times it may be covered up by clouds of misfortune—the result of those fickle and unforeseen changes in the fashions. These, however, soon lose their novelty, and the fine wool is again in demand on account of its softness, strength and beauty.

Thus it is always advisable when fashions change to still cherish the Merino and use it for crossing on larger sheep, which will supply by this cross the longer and coarser fleeces demanded to meet the fashion for the time. Then, when reason regains her throne again, and people come back again to the old favorite, the Merinos are all right and ready for good business, and the cross-breds may be sent to the butchers, where they will do the most good and fill the always present want for good meat.

This is business. But much of the bad management, that costs so much in the end of the flocks, is due to sudden irritation and blind passion, the results of which are sure to be regretted after it is too late; and many fine flocks, gathered at much cost and care and pains, have been scattered and gone out of existence.

The culling of the flock judiciously is the same as weeding the crops. It is getting rid of the dead-heads, and thus gives the money-makers a better chance to make profit. It is always in order, and the time to do it is every day in the year that may be necessary. An unprofitable thing is a loss at all times, and no good can result from keeping it one day after it is detected. The best of times will not excuse the existence of a weed in a flock any more than it will in the garden or the cornfield. It is always when bad times come that the shepherd sends the culls to the market, and gets only the value of the pelt, because every one is doing the same thing at the same time. But by constant selection of the poor sheep, there will be no flush of supply, and the full meat value will always be obtainable. This is business, too.

"A small part of the commerce of the world is still carried on by the use of shells as a medium of exchange," says E. G. Woodcraft, a New York broker. "The Portuguese found this sort of money in use by the natives of the eastern coast of Africa when they opened up trade in that region, and have found it to their advantage to continue the practice. Fortunes are said to have been made by collecting the shells on one part of the African coast and putting them in circulation at a point only a few hundred miles away. These shells are sold by weight. The price varies according as the supply compares with the demand. Prices have been known to double and even treble within a few months. The prices also vary greatly within short distances. What has cost the merchant from 50 cents to \$1 in the market, will often bring him \$7 or \$8 worth of goods in another market."



## THE FIELD.

## The Russian Thistle in California.

University Experiment Station Bulletin No. 107—By C. H. Shinn, Inspector of Stations.

(Continued from last issue.)

A second letter from Mr. Dewey, under date of February 23rd, adds that: "Information has been received chiefly from Mr. John Scott, Commissioner of Horticulture, Los Angeles, and from Mr. Abbu Dunning, postmaster at Lancaster. A letter just received from Mr. Scott states that he has unconfirmed reports of the Russian thistle south of Tulare City and also between Pixley and Tipton. Mr. A. H. Leekenby, of Bakersfield, writes that the Russian thistle has been reported as growing in Kern county, but as yet he has been unable to verify the report." If the thistle is indeed established south of Tulare City, it must be some distance outside of the town limits, as on April 6th the writer, together with Mr. Julius Forrer, foreman of the Experiment Station near Tulare, made a careful examination of the railroad tracks, ditches and roadsides in and around the town without discovering a single specimen of this obnoxious weed. Later in the season it will be much easier to discover any thistle plants.

While corresponding with the Department at Washington it was ascertained that Mr. W. S. Melick, proprietor of the Lancaster *Gazette*, quite an extensive land owner in Antelope Valley, was especially well posted upon the subject, and he placed himself at the service of the Experiment Station.

Under date of February 10th, Mr. Melick wrote, "You can do nothing studying the Russian thistle until later. It has not begun to grow yet. About April or May would be the time to see it here. Our altitude makes all crops late. There is no doubt but that this is the true Russian thistle. It has been here four or five years, but it has not spread much. This is a desert town surrounded by sage brush, so the thistles which grow get lodged in the sage brush and do not travel far."

"By the advice of Horticultural Commissioner Scott, under the Board of Supervisors, all last year's crop has been burned. As the land about Lancaster is not farmed much, few farmers are bothered with it as yet. I think the only way to get rid of it is by prompt, vigilant action of Boards of Supervisors or the State authorities."

**VISIT TO ANTELOPE VALLEY.**—In accordance with Mr. Melick's suggestion, the writer waited until some growth had been made before visiting the infected district. April 3d and 4th was spent in the town of Lancaster and its immediate vicinity. The area over which the weed to some extent prevails extends over about eleven sections of land. As noted by Mr. Melick, it first appeared in the streets of the town near the railroad track, several years ago, probably brought in by cattle ears, as there is very little immigration by wagons across that district. The weed naturally attracted little attention at first, but by last year it excited a good deal of alarm, and Mr. Melick and others began to organize public work. The County Supervisors wisely agreed to spend some money, and men have worked more or less during the last winter burning the old weeds, and are now harrowing under the young plants wherever they appear. About \$400 has been spent in this manner. It is hardly necessary to say that this work merits the approval and hearty support of every citizen and newspaper in Los Angeles county. If the expenditure of ten thousand dollars would utterly destroy the Russian thistle in the Antelope Valley, it would be a good investment.

The country which may be termed the present headquarters of the Russian thistle in California, is a level plain of rich, sandy soil in the southern portion of the famous artesian belt of Antelope Valley. Antelope Valley lies along the borders of Kern, south of the Tehachipi, and north of the La Liebre Mountains. It contains 1100 square miles of territory, and has an average elevation of 2600 feet. Although the rainfall is light, the valley contains a number of colonies irrigated from streams and reservoirs, a famous grain belt of seventy thousand acres lying along the southwestern hills, and the artesian belt to which I have already referred. A large area is undoubtedly incapable of irrigation, and receives too little rain to make it reclaimable. If the Russian thistle extends over these waste and barren sections along the middle of the valley and extending east into the Mojave and the Colorado deserts, or if it escapes into the mountain canyons, its entire destruction will become impossible. But it can certainly be conquered in all the colonies and plow-lands. It can also be choked out in every well-grown alfalfa field.

The first offshoot from the original thistle colony has already appeared about ten miles west, in sections 25 and 25, township 7, range 14. This is in the edge of the grain belt, and unless destroyed the thistle will soon appear along the whole line of the foothills. The wheat grown here is of the finest quality, and much of it is hauled out through the Tejon Pass. It is also shipped to Los Angeles and other points along the railroad. If every farmer takes pains to plant only clean seed, and if the rolling weeds are destroyed, this small colony will soon disappear under close cultivation. But directly west lie the pastured foothills and the mountains that surround Elizabeth Lake. There is, therefore, extreme danger that the weed may soon become naturalized in this thinly settled mountain region, which extends all the way to Ventura. Immediate action is therefore necessary.

Returning to the original thistle colony, at Lancaster, the artesian belt covers about eighty-eight square miles, and already contains eighty-three flowing wells. But these are scattered, the region being still thinly settled, and one often finds a few acres of alfalfa, grain or orchard surrounded by native desert. The sagebrush, and other shrubby growths standing up on little mounds of sand and the belts of tree yuccas, have served the excellent purpose of preventing the thistle-heads from moving far or rapidly, even under the wildest gales. Perhaps from this reason the thistle seems very thickly sown in some portions of the infected district. There are places in the streets of the town where the slender, reddish leaves of the plant, much resembling a young pine, almost cover the ground. It is very easily destroyed, however, with harrow or cultivator. The well-grown alfalfa fields seem to be little troubled, but where there is a poor stand the thistle is coming up. Excellent work has been done by the employees of the county supervisors, and it is now difficult to find a single specimen of last year's weeds. In the town itself all the young plants can easily be reached and destroyed. On the uncultivated territory the case is much more difficult.

Another letter received from Mr. Melick early in May encloses samples of the thistle after about six weeks' growth. They have begun to branch strongly, are about six inches high, and becoming too hard for even sheep to nibble. Mr. Melick says the young plants are extremely abundant, but can be very destroyed between now and the first of August. He thinks six hundred dollars spent now would ensure the destruction of every plant in

the valley, but he says there ought to be no delay, for it is spreading. The weed has now been found along the Armagosa Creek wash, which extends from Lancaster south along the railroad for about five miles, and then stretches off in a southwesterly direction to the Leonis Valley in township 5 N., range 13 W. The late rains have caused unusual growth, and there is no time to lose if Los Angeles county is going to protect the colony districts. As Mr. Melick aptly says, "A public sentiment will have to be created."

**DISTRIBUTION FROM ANTELOPE VALLEY.**—At first thought Antelope Valley appears to be some distance from main lines of travel, and a point from which distribution will be slow and difficult. On the contrary, few points in the State are more immediately dangerous. There is a strong probability that the thistle has already been carried southward along the line of the railroad into San Fernando Valley, and the branch railroad from that point affords easy access to Ventura and Santa Barbara. In a very short time, unless controlled, the weed will move eastward to the line of the Atlantic and Pacific, and northward into the San Joaquin. In fact, it has already crossed the Tehachipi range, and has made its appearance in Kern county. A letter received from Mr. G. F. Weeks, editor of the *Daily Californian* of Bakersfield, says: "It is growing here, from seed evidently scattered from cars that have come through Nebraska or some other infected section, as at present it is only found along the railroad tracks." As previously explained, however, the thistle may have reached Kern county by way of the Tejon Pass, through which there is a great deal of travel to and from the Antelope Valley, but it is evident that the same cause which once brought the weed to California is likely to continue in force, and we may expect it to appear in many parts of the State. Judging from the experience of South Dakota, it is probably already growing unsuspected by many a roadside and in many a pasture.

During the present season every effort should be made to locate the various points of infection in both northern and southern California, and determine their areas. The only dependence in the determined warfare that must now be made must be upon thorough local organization. If farmers will destroy the weed upon cultivated land, and if the county authorities will destroy it by the roadsides and over uncultivated places, the railroads and other corporations will probably be willing to do their share. The railroad companies, irrigation companies and similar corporations have a large interest in the matter, but the whole community must be aroused, or the work will not be done.

**SUGGESTED REMEDIES.**—Since the plant is an annual it is easily killed during the growing season. For three months from the time it sprouts no good farmer need be afraid of it, but, according to Dakota experience, concerted action is necessary. The fundamental principle of the conflict must be: *No Russian thistle should be allowed to produce seed.*

The vitality of the seed, as compared with other annuals, appears to be low. The conditions affecting seed vitality are moisture and heat. The seeds of this plant crack, and the germ is destroyed by a low degree of dry heat, hence when stubble and pasture fields are burned over in the autumn the larger part of the thistle seed will be kept from germinating.

The tap-root will not sprout again when cut at the surface, and if the plants are plowed under they perish as easily as mallows. In orchards, vineyards, beet-fields, and all lands devoted to hoed crops, there should be no trouble with respectable cultivation. But if a farmer stops at the limits of his cultivated land, he must do the same work every year. Fence corners, creek-borders, and waste places of every description, must receive the same attention, or the Russian thistle will again seed the fields. The slipshod cultivation so often seen even in the most fertile parts of California, and perhaps endurable with less aggressive weeds, though never advisable, or profitable, becomes entirely impracticable after the Russian thistle once obtains foothold.

The Minnesota Experiment Station bulletin lays great stress on upon the use of what is called the "green-manure fallow" in cultivated lands. Modified to suit California conditions, this means to plow shallow with the first rains, and sow bur-clover or some similar crop, to plow under, with the young thistles, for a green crop fertilizer. After the last plowing one must go over the field and hoe out any stray plant.

If the thistle is found in grain fields it would be better to cut for hay as early as possible and plow the stubble under, without waiting for the aftermath. A second plowing may also be necessary. In most sections this system will clear the grain fields in two seasons, if no seeds are allowed to blow into the fields.

As soon as the grain crop is harvested the stubble and weeds should be burned in every case where the thistle has appeared. In our dry climate this is always easy, and it has been suggested that the use of a header, as leaving a greater amount of stubble, furnishes the material for more thorough burning. Especial attention should be paid to any patches in the grain fields where a poor stand of grain has allowed the thistle to develop into large "tumblers."

Well-graded highways are easily kept clean by dressings with a reversible road machine, and by vigorous use of the hoe on the narrow borders. Wide, unutilized road-spaces are difficult to deal with, and often will have to be plowed and cultivated. Attention should be paid to the road ditches, whose sides should be so sloping that they can easily be cleaned from top to bottom. Along infested highways the cultivation should extend to the wheel-tracks. The scythe seldom cuts low enough, as the thistle branches so close to the ground that many seeds will be left. Burning is preferable, or the hoe. Professor Bolley says: "A small force of workmen is sufficient to destroy all the weeds upon road margins of the worst infested townships. A foreman on horseback constantly inspecting the work of a dozen men can rapidly get over the country."

In order to prevent the large weeds from rolling, the Russians plant belts of sunflowers which stop the plants, collecting them in high banks, and they are then burned. Belts of trees, or any other windbreaks, answer the same purpose, as do fences, excepting that the weeds must be raked back so as not to injure trees or fence when fire is set. This, of course, is expensive, on a large scale, and there is no doubt that the time to fight the thistle is when it can still be plowed under. In Dakota the farmers harness ten or twelve horses by long ropes to immense bars of wood, and drag very large piles of the weeds into heaps to burn. Any work of this kind should be followed by burning the stubble, and by two plowings before another crop. Our system of managing orchards gives us every advantage.

In cities, towns and villages special care is needed, not only on the streets and sidewalks, but upon all the unoccupied lots. In California, as in the Northwest, the points of infection usually begin at or near the railroad station, and the townspeople and merchants should make stringent regulations to suppress the thistle at its first appearance, and not allow it to escape into the farming country to lessen the value of town property. The owners of lots should combine and break up every neglected piece of ground, sowing it to alfalfa, or, where water cannot be obtained, to such a



plant as the Australian salt bush (*Atriplex semibaccatum*.) It is needless to say that this would make our towns and villages look much neater. A town ordinance could tax non-residents for such necessary improvements, and town trustees have the power to pass such an ordinance.

When the Department of Agriculture sent out circular letters for information, one question read "In what manner was the Russian thistle introduced?" The bulk of the answers were "By the wind," and "In impure seed." Considering the second cause, it may be said that many small threshers do not thoroughly clean the grain, and thistle seeds, or pieces of stem containing seeds, may easily find their way into the sacks and be sowed again the following season. Poor (or careless) farmers who buy cheap grades of seed grain, or flax, or clover, or millet, may obtain a liberal stand of thistles without extra charge. The papery flower-parts of a thistle seed often adhere even after passing through a threshing machine, so the mass varies considerably, from naked seeds as large as a clover and about half as heavy, to pieces the size of a melon seed. If the fans are properly adjusted, thistle seeds can be blown out even from flax or clover, but it is much more difficult to separate them from grains of millet. Fortunately, the California farmers do not grow millet extensively, but we raise a good deal of flax for oil, and the coast districts devoted to that crop should pay special attention to the subject of sowing only clean seed.

**SOME GENERAL CONSIDERATIONS.**—From the preceding pages, the reader will conclude that while the Russian thistle is dangerous, it can be conquered by persistent work. Many other weeds when well established furnish more trying problems to the individual farmer. The small morning glory, or wild convolvulus, of our rich bottom-lands is infinitely harder to destroy.

We may classify all weeds from the cultural standpoint as either annuals, biennials, perennials with underground, creeping root-stocks, and perennials without creeping rootstocks (rootstocks are underground stems with buds). In order to know how to fight a dangerous weed it is first necessary to study its root system and method of propagation, and then the proper measures to exterminate the weed can readily be ascertained. To some extent these classes intermingle; a weed which is an annual in one

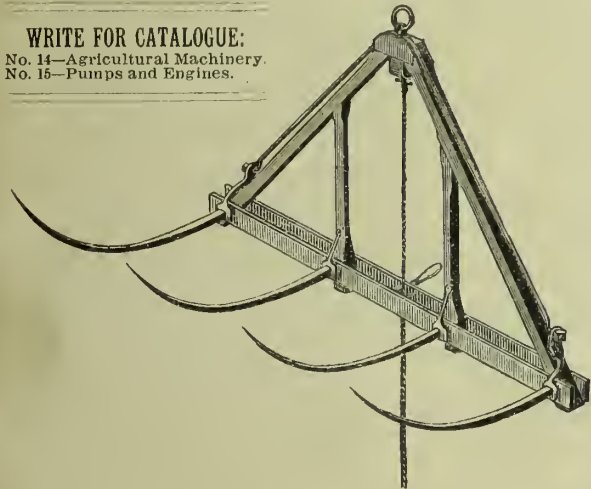
country, owing to climatic conditions, may be a biennial or a perennial in another country; but the root system offers a more stable basis of comparison. The annuals can be again divided into those which ordinarily live and die in the same place, and those "tumble-weeds," such as the subject of this bulletin, which traverse a considerable region before their power for mischief has come to an end.

Decidedly the most troublesome class of ordinary weeds are those perennials with permanent roots, whether creeping or not. The ordinary species of *Rumex* (the common docks of our fields), the plantains, the ox-eye daisy (*Leucanthemum vulgare*), and the golden-rods, are illustrations of one type, while the wild morning-glory, the wild licorice (*Glycyrrhiza lepidota*), the Canada thistle and the ordinary mint have the horizontal rootstocks, which, as previously stated, are really creeping underground stems, every joint of which will make a new plant.

**LINE OF FURTHER WORK.**—Now that we know of the presence of the Russian thistle in California, and have the experience of other States to guide us, it should be our first duty to map out the areas of distribution, no matter how small. The Experiment Station invites farmers, land-owners, road overseers, supervisors, and all persons interested in the agricultural welfare of California, to send samples of weeds suspected to be the Russian thistle to the director, Professor E. W. Hilgard, for determination. We invite further correspondence on the subject, and in all cases where it seems advisable a representative of this department will go to any part of the State, either to identify and map out suspected infection centers, or to deliver a lecture to the people. By the close of this summer we ought to know fairly well whether the thistle has entered the State by way of Nevada and Oregon, in which case it is already in the Sierra foothills and in the Sacramento Valley. If the only colonies we now have are those extending from Lancaster an energetic campaign ought to conquer the enemy. While devoting attention to the great interior valleys, however, we should not neglect to study the smaller coast valleys, where the use of impure seed may have already established unsuspected plantations. In short, it behooves us to examine every portion of the State, and there is no county whose supervisors should not be prepared to take active measures of self-defense.

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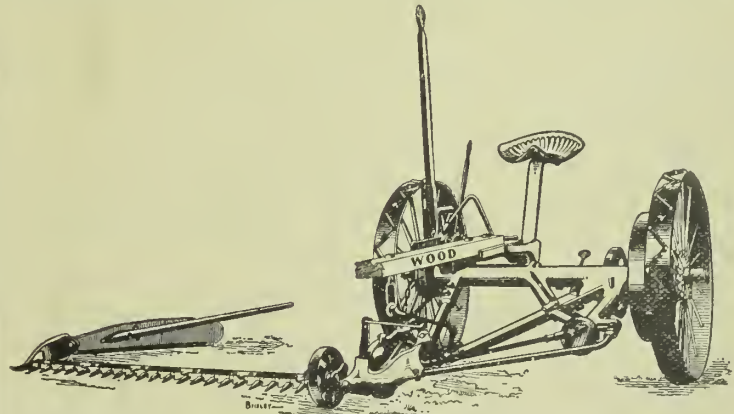
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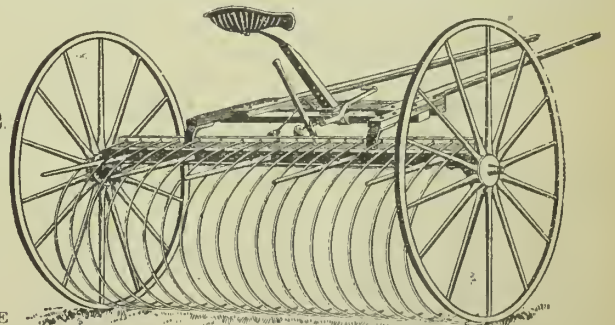
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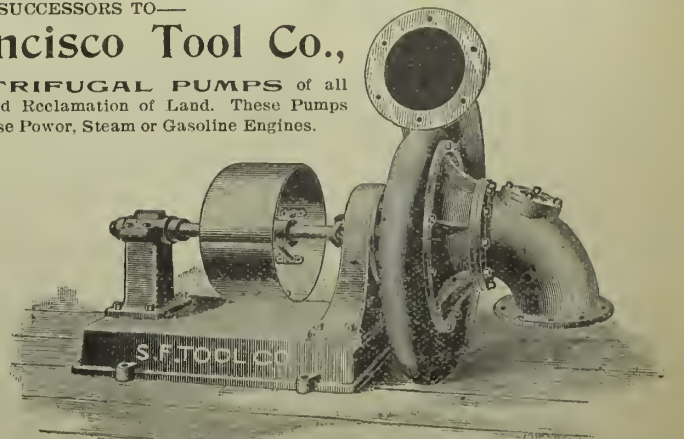
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## THE HOME CIRCLE.

## Mother's Reward.

Don't feel too proud to kiss mother, my boy,  
Her love ever yearns for some pay,  
Ah, "Actions speak louder than words," my boy,  
Go pay her then, this very day!

Don't feel too big to caress her betimes,  
With mother's caresses you're blest—  
Pray think of the numberless lads, my boy,  
Whose mothers have long been "at rest!"

You owe her for many a kiss, my boy,  
She lavished so oft upon you,  
When others turned from your suffering couch—  
Return these, with interest, too!

I know that her cheeks are wrinkled and thin,  
Alas! they have lost all their bloom;  
But O, how you'd shower your kisses thereon  
Were she now arrayed for the tomb!

Too late, too late to kiss mother, my boy,  
When pulseless and cold her dear brow;  
Then let her know you love her, my boy,  
Pray hasten to tell her so now!

Assure her: she's "the best mother on earth,"  
That the right for her sake you'll e'er seek,  
Then seal your promises given, my boy,  
With kisses upon her pale cheek.

Sweet recompense! Ah, she will surely feel  
Rewarded for all her hard care,  
And happy, most happy, you'll be, my boy,  
With mother love tokens to share.

—Fanny L. Fancher.

## My Mending Basket.

It is made of the stoutest of willow:  
It is deep and capacious and wide;  
Yet the Gulf Stream that flows through its borders  
Seems always to stand at flood-tide!

And the garments lie heaped on each other;  
I look at them often and sigh,  
Shall I ever be able to grapple  
With a pile that has grown two feet high?

There's a top layer, always, of stockings:  
These arrive and depart every day;  
And things that are playing "button-button"  
Also leave without any delay.

But, ah! underneath there are strata  
Buried deep as the earth's cocoon;  
Things put there the first of the autumn,  
Still there when the trees have grown green!

There are things to be ripped and made over:  
There are things that give out in their prime;  
There are intricate tasks—all awaiting  
One magical hour of "spare time."

Will it come? Shall I ever possess it:  
I start with fresh hope every day.  
Like a will-o'-the-wisp it allures me:  
Like a will-o'-the-wisp fades away.

For the basket has never been empty,  
During all of its burdened career,  
But once, for a few fleeting moments,  
When the baby upset it, last year!

—Bessie Chandler, in Harper's Bazar.

## The Dawson Boy.

Miss Amanda Goldsmith had sprained her ankle. It was a bad sprain, the doctor said. So for weary weeks she sat at the window in an easy chair, the injured member carefully bandaged.

Miss Amanda was not naturally a patient person, and it was hard for her to forego the housework in which her soul delighted for the sewing which she detested.

"I'm as tired of that foot as if it was a baby," she exclaimed impatiently to her niece one day.

"It's been a pretty good foot to you, after all, auntie," answered Maria, who was carefully swathing the lame ankle. "So it has. I've always made it go, but it's got the better of me now. O—h!"

"Too tight?" asked Maria, with sympathy. "I'll ease it a little."

She did so, and then left her patient to her meditations. Judging by Miss Amanda's face, they were not pleasant. She sewed a little, but her thread broke and her spool rolled away into a corner. This state of things did not greatly grieve her. She folded her work and turned her attention to the passers-by. Of these, first and foremost came the Dawson boy.

"I knew it!" cried Miss Amanda to herself. "I knew that boy'd be around to the store again before two o'clock. That's three times this morning. I wonder if his mother ever keeps two cents' worth of anything in the house. What's that hanging out of his bundle? A piece of meat, as sure as I live. And he's tantalizing that little dog with it."

Here! Stop that! I can't stand it!"

She was about to rap on the window-pane, when she saw the boy stoop and stroke the dog caressingly. Then opening another bundle, he took out a roll and held it up before the hungry animal.

Miss Amanda's quick sympathies veered about, like an inconsistent weather-vane.

"Don't you do that!" she called impatiently. "A whole roll to that dumb beast! I don't believe your mother has any bread to spare, either. Stop it now! Stop it this minute!"

This time she did rap loudly with her thimble finger; but, alas! the roll had disappeared.

Hearing the summons, the boy ran quickly to the window, a look of surprise on his rosy face. Passing the house many times daily, his bright eyes had by no means overlooked the slight figure, as it sat so persistently day after day in the same sunny corner.

"Seems to me she keeps awful still nowadays," he would say to himself. "Used to see her dustin' round and cleanin' up things. Wonder what ails her."

"You're sick, ain't you?" he remarked, as he reached the window.

Miss Goldsmith's answer was hardly to the point.

"What are you giving that good roll to that dog for?"

"Ma'am?"

"Oh, dear!" cried Miss Amanda. "He can't hear a word." She made a vigorous attempt to open the window, but the only result was a twinge of pain from the remorseless ankle.

"Don't stand there looking at me!" she exclaimed petulantly. "It's of no use. Your mother wants you."

She waved her hand impatiently. Still the boy lingered.

"Was there ever such a dunce? He doesn't even know enough to go home. Maria, tell that boy if he stands gaping at me any longer I'll take my cane to him."

Maria opened the door. The boy ran to her with an eager inquiry.

"What does she want?"

"She wants you to go home."

"But I was going home when she called me over."

"She thought you were giving too much of your good bread to that dog."

"Oh!"

"She wants you to go home now," repeated Maria.

"But she pointed this way"—illustrating—"and I live that way."

"Never mind. Take the shortest way. Good-by!"

But the Dawson boy didn't stir.

"She's pretty sick, ain't she?"

"She has sprained her ankle. It pains her badly."

"I thought somethin' pained her. She kep' so still. It's too bad, ain't it?"

"Yes. It's too bad. Good-by!"

"My father's aunt broke her hip, an' never stepped a step after it."

"I'm very sorry. Good-by!"

The boy turned to go, but called back, in a would-be solemn tone,

"She's dead."

"That's very sad," responded Maria. "Good-by!" and she shut the door.

"So he's gone at last," said Miss Amanda, wearily. "That boy aggravates me to death. I believe I'll tell him to take another street."

But she didn't tell him, and the Dawson boy came and went daily.

He watched Miss Amanda with keenly sympathetic eyes, heedless of the disapproval which hers expressed so keenly; and when one morning he found the chair empty and saw its late occupant moving slowly about the room, he perched himself up on the opposite fence, that he might watch his patient more at his ease. "She has to go it slow," was his mental comment, "but I guess she'll get about again." And down he jumped and off he went to do the errand which he had forgotten.

It was more than a fortnight after this that a small figure, slightly bent and leaning, stepped out from the doorway of the corner house. Unexpected business called Miss Goldsmith to the

city. To take a carriage would have seemed reckless extravagance to the thrifty little woman, so she limped painfully to the corner.

"Hope I've allowed time enough to catch that car," she thought anxiously. But, alas! just as she was within a few steps of the white post the electric car swept noisily and spitefully by.

"What am I to do now?" she asked herself, much disturbed. And, indeed, there was cause for anxiety. The next car was not due for fifteen minutes. To go back was not to be thought of. The poor ankle, so unused to active work, was throbbing painfully. She looked around. There was absolutely nothing upon which to rest, and to stand longer seemed impossible.

She leaned heavily upon her cane. A feeling of helplessness came over her. It was a feeling altogether new and strange, and she didn't like it.

Suddenly she heard a sound of whistling, which seemed familiar, and the Dawson boy appeared upon the scene. This time he carried in his arms three bundles of kindling wood, which he had just purchased.

"It's too bad you lost that car," he remarked with sympathy.

"Yes," replied Miss Amanda, grimly.

"If I'd been up here I'd 'a' made him stop."

"You'd have done great things," sarcastically.

"Ankle pain you much?" asked the boy, with unabashed good nature.

"Some."

"Hurts you to stand up, don't it?"

"Yes, it does," as a fresh twinge of pain made Miss Amanda scowl.

The boy scowled also. He was thinking deeply. Suddenly his face brightened.

"I can fix you up a seat if you'll sit on it," he said, eagerly.

"You! How?"

"Why, so!" And down went the three bundles of wood upon the pavement. Carefully he placed them one over the other, fitting them perfectly.

"There!" he ejaculated with great satisfaction. "Seems's if they was made for it, don't it?" Small and perilous as seemed the resting-place, it was, nevertheless, very inviting to poor Miss Amanda.

"Are you sure they'll hold together?" she asked, anxiously.

"I'll try 'em." And the Dawson boy sat down very hard, trying his weight with a recklessness which augured well for the improvised seat. He turned, he twisted, he bounced up and down. Finally he stood upon it, waving his hands like a professional acrobat.

"It's all right," patronizingly.

"Just you try it! You ain't very heavy, are you? How much do you weigh now?"

Miss Amanda didn't seem to notice this important question. The Dawson boy thought she was laughing.

At all events, she deliberately seated herself upon the kindling wood, the boy holding the bundles together until it was perfectly safe to let go.

"There she is!" he exclaimed in a jubilant tone. "Ain't that enough sight better'n standin' up on a lame ankle, now?"

"Indeed it is!" was the grateful reply. "It was a bright idea of yours, and I'm very much obliged to you. But isn't your mother in a hurry for the kindling?" she asked, after a pause.

"Oh, she can wait. She'd just as lieves."

"But you ought always to do your errands as quickly as you can."

"Lucky for you I didn't this time, ain't it?"

Miss Amanda was silent. Was she laughing again? If she was, she recovered herself quickly, and looked at the boy before her with a genuine interest.

"He is really a very good-looking little fellow," she said to herself.

They were in the midst of an animated conversation, when they heard the distant sound of the autocratic electric. Miss Amanda arose quickly, while the Dawson boy seized his bundles with a "Whoop-la! Come on! We've got to go to that corner" and ran

nimbly across the street, leaving his companion to follow.

"You needn't hurry," he cried, complacently; "they'll have to stop." And, surely, the haughtiest electric in the land could hardly have ignored the vociferous shouting, the brandishing of arms, and the frantic waving of kindling wood which announced to the amused conductor that a lady was coming.

"Good-by!" screamed the boy.

"Good-by!" called Miss Amanda. And she was off.

Every one looked at her as she entered the car, flushed, half with annoyance, half with amusement, and feeling, as she afterward expressed it, "like somebody in particular."

The elderly gentleman beside whom she took a seat looked benignly down upon her.

"Your son is an attentive little fellow," he remarked, pleasantly.

Miss Amanda could only nod politely. "He must be a great comfort to you."

She tried in vain to reply. The gentleman looked at her more curiously.

"A queer couple," he thought to himself. Then he unfolded his newspaper, and forgot them both.

Miss Goldsmith accomplished her errand and returned home, very tired. It is true, but with that sense of relief which always accompanies a duty done. As she and Maria were sitting together over their dessert that noon, they heard a vigorous knocking at the back door.

"That must be the Dawson boy," exclaimed Miss Amanda. "Bring him in here, please. I want to see him."

"The Dawson boy!" cried Maria, with surprise.

"Yes. He's coming every day. I've engaged him to do my errands."

"Coming every day!—to do errands! That Dawson boy!" Maria could say no more.

"I knew 'twould surprise you," said Miss Amanda, with an apologetic little laugh. "But—well—you see, Maria, we all have our streaks of good and bad, every one of us; and there's a very broad streak of good in that Dawson boy. I found it out this morning. When I got fairly rested I'll tell you all about it."

## Popular Science.

A whale is an animal. It is warm-blooded; its young are born alive. The mother suckles them just as a cow suckles its calves.

The albatross has been known to follow a ship for two months without ever being seen to alight in the water or take a moment's rest. It is believed to sleep on the wing.

The Missouri is the longer river and the Mississippi really joins the Missouri. But the Mississippi was discovered first, and obtained the reputation of being the principal stream.

The result of meteorological tests with balloons at immense heights is announced from Bremen. One balloon, carrying self-registering instruments, reached a height of twelve miles. The thermometer could not register the temperature, 67° below zero being

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**PRICE'S**  
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marked at a lower height. Many tests show that the temperature sinks gradually up to two and a half miles. Above that the fall is much more rapid.

The mole is not so blind as many persons suppose, according to an English authority. Its eye is hardly larger than a pin-head, and is carefully protected from mist and dirt by means of enclosing hairs.

Lake Superior has a surface measurement of 32,166 square miles. Islands of Lake Superior have an area of 660 square miles and the bays an area of 1041 square miles, leaving a total area of open lake water surface of 30,465 square miles. The boundary line over the lake between the Dominion of Canada and the United States is 200 miles long. The combined area of the great lakes of the St. Lawrence is 95,275 square miles, and a third of this is formed by Lake Superior.

The mileage of the blood circulation reveals some astonishing facts in our personal history. Thus it has been calculated that, assuming the heart to beat sixty-nine times a minute at ordinary heart pressure, the blood goes at the rate of 207 yards in a minute, or seven miles per hour, 168 miles per day and 6320 miles per year. If a man of eighty-four years of age could have one single blood corpuscle floating in his blood all his life, it would have traveled in that same time 5,150,808 miles.

Indefinite penetration toward the center of the earth is prevented by the increasing heat encountered, but a scheme has been made public by which it may be possible to explore farther than hitherto. The method is to sink first a shaft as far as the temperature will permit, then a pipe reaching from top to bottom is built in, down which is forced a blast of cold air which, it is thought, will effect the requisite cooling if continued for some time. The pipe is lengthened piece by piece as the deepening proceeds. An exhaust pipe should also be provided, and the shaft walls, when not air tight, should be so made so by a sheathing of metal plates or other coating. As the shaft is made deeper the heat increases and consequently a stronger blast is required. At a certain depth air must be pumped from the bottom in order to render the pressure endurable to men. In spite of all these precautions the deepening will be finally prevented by conditions existing in the earth itself; for example, accumulations of gases.—*Deutsche Bauztg.*

#### Gems of Thought.

Euripides was wont to say that silence was an answer to a wiseman; but we seem to have greater occasion for it in our dealing with fools and unreasonable persons, for men of breeding and sense will be satisfied with reason and fair words.—*Plutarch.*

It is curious to observe how people who are always thinking of their own pleasure or interest will often, if possessing considerable ability, make others give way to them, and obtain everything they seek, except happiness, for, like a spoiled child who at length cries for the moon, they are always dissatisfied. And the benevolent, who are always thinking of others, and sacrificing their own personal gratifications, are usually the happiest of mankind.—*Whately.*

One of the first motives to civil society, and which becomes one of its fundamental rules, is that no man should be judge in his own cause. By this, each person has at once divested himself of the first fundamental right of uncovenanted man—that is, to judge for himself and to assert his own cause. He abdicates all right to be his own governor. He, inclusively, in a great measure, abandons the right of self-defense, the first law of nature. Man cannot enjoy the rights of an uncivil and of a civil state together. That he may obtain justice he gives up his right of determining what it is in points the most essential to him. That he may secure some liberty he makes a surrender in trust of the whole of it.—*Burke.*

#### Fashion Notes.

Ostrich feathers are very much worn arranged to stand straight and high and drooping over the hair. All sorts of wings, made of lace, jet or steel, are as popular as they were in the winter, and sometimes as many as three pairs are seen on one small toque. Chiffon wings, edged around with one row of tiny jet beads and another of sequins, are exceedingly airy and effective. The latest novelty in flowers consists of tiny points of cream lace, with deep yellow centres.

The newest straws are soft, glossy and loosely plaited, often mixed with silk, and come in all the palest tints, as well as the brightest colors. Butter color is perhaps the most popular and becoming.

Extreme width is the special feature of the sunbonnets, and wing-like appendages of jet, lace, ribbon or flowers are necessary to fashionable headgear. One stylish bonnet of shot green and black has a wired black lace bow with jet loops on either side and mauve orchids and an aigrette for additional trimming.

A Napoleon hat in burnt straw is trimmed with black tips, black satin ribbon and paste buckles.

Black straw hats are trimmed with bows of wide colored satin ribbon for young girls, green being a very popular shade, and broad black hats, for middle-aged women to wear in mid-summer, are adorned with pink roses and black feathers, and the brims are covered with cream lace.

#### Humorous.

His love, he said, was like the sea.  
The maiden answered quick  
She thought that he was right in that  
Because it made her sick.—*Life.*

"Well, Tommy, have you learned anything at school?" "Yes, sir, I've learned to wear a lung protector in the seat of my pants."—*Life.*

Bridget: "Soy, Pat, for why is it they calls this our tin weddin'?" Patrick: "Faith, an' its becane we've bin married tin years."—*Credit Lost.*

Watts: "So you don't believe that the good die young?" Potts: "That used to worry me a good deal when I was a boy, but I know better now."—*Indianapolis Journal.*

On a Virginia farm, two colored boys who were hired to weed onions were started at opposite ends of a row and told to weed toward each other. "It's done mo'n what you's done," said Dan, presently. "No you ain't nuther," asserted Sam. "Yes I is, den," glancing down the row. "It's lots nearer to yo' dan yo' is to me."—*Harpers' Bazar.*

A newspaper funny man has invented not an absolutely fresh, but a comparatively new joke upon a very old subject. Miss Timid was talking about her own nervousness, and her various night alarms. "Did you ever find a man under your bed, Mrs. Bluff?" she asked. "Yes," said that worthy woman. "The night we thought there were burglars in the house I found my husband there."—*Youth's Companion.*

#### Sewing a Womanly Art.

Sewing is the most womanly art. A woman is never more feminine than when she has a needle and thread in her hand. It is the right of every little girl to be taught to sew neatly even if it costs the mothers some self sacrifice. Very few women are wholly exempt from the needle. On the contrary, almost every woman must take more or less care of her own wardrobe even if she has no family responsibility. Machines cannot sew up rips in gloves, replace buttons or mend. Some stitches must be taken, and how to sew neatly is an accomplishment quite as necessary, if not more so, to the happiness of a majority of women than any others. If a little girl be taught early how to use her needle sewing will soon become a sort of second nature to her.

#### DOMESTIC ECONOMY.

##### Hints to Housekeepers.

Concerning the successful preparation of croquettes Mrs. Rorer says: In covering croquettes, or anything for frying, bread crumbs should always be used, as the shortening used in making the crackers attracts the grease. Then boiling fat must not be used. It should be smoking hot and fully that. Too hot fat burns the croquette before it can fry, and too cool fat usually bursts the covering. Another cause for the bursting is that the article to be fried has not been entirely covered by the egg as well as the bread crumbs. Great care should be taken that every part should be entirely covered.

A domestic who had recently arrived in Chicago from Sweden was instructed to boil some potatoes for bread-making purposes. She put them in the wash boiler with some clothes, and upon being taken to task for it explained that this was the custom in Sweden; that in this way the housewife starched her clothes, while at the same time preparing the potatoes for bread-making.

To keep the face clean without the use of soap make a little bag of cheese cloth and fill it with bran, oatmeal or almond, and when you wash your face use this bag in place of soap. When the bag is dried it may be utilized again if the meal is almond, but where oatmeal is used it should be renewed every day.

Vinegar used to wash the wall before papering will help the paper to stick.

Vinegar for soaking lamp wicks makes a brilliant light.

Kerosene simplifies laundry work.

With a little care you can sweep the dirtiest carpet without raising much dust by placing outside the door of the room to be swept a pail of clear, cold water. Wet your broom, knock it against the side of the bucket to get out all the drops, sweep a couple of yards, then rinse off the broom again. Continue this until you have gone over the entire surface. If the carpet is very much soiled the water should be changed several times. Slightly moistened Indian meal is also used by the oldest housewives. Snow, if not allowed to melt, is also excellent as a dust settler.

If you suffer from canker, boil a carrot and hold the water in the mouth frequently; it will soon afford relief.

If recommended by a physician to take any medicine containing iron, drink it through a straw or glass tube, as it is very injurious to the teeth if allowed to come in contact with them.

A nice way to keep wax for the work basket is to fill half shells of English walnuts with melted wax, fastening the two half shells closely together at one end. There will then be a small space at the other end, through which the thread will slip when the wax is being used.

##### Kitchen Helps and Hints.

Do you know that a little cornstarch in your salt sifters will keep the salt from becoming damp or caked.

That silver washed in strong soda water once a week will keep it bright and clean.

That the taint may be removed from meat by boiling in water into which a few pieces of charcoal have been placed.

That in winter snow can be used as an excellent substitute for eggs. Two large spoonfuls will supply the place of one egg. The snow should be fresh

fallen or under layers, as the exposed surface loses its ammonia by evaporation.

That milk which has turned by heat can be made sweet again by mixing with it a small quantity of carbonate of magnesia.

That flour warmed before using it for mixing hastens the lightening process.

##### Domestic Hints.

**QUICK BISCUIT.**—One pint of flour, one heaping tablespoonful of shortening, one saltspoonful of salt, two heaping teaspoonfuls of baking powder, one cup of milk. Beat well and bake in a hot oven.

**EGGS ON TOAST.**—Put one tablespoonful of butter, with a little salt and pepper, into a chafing dish, and when hot add one gill of cream and six eggs slightly beaten. Stir constantly for two or three minutes and serve on slices of hot buttered toast.

**BOILED CUSTARD PUDDING.**—Mix a pint of cream, with six eggs well beaten, with two teaspoonfuls of rose water and eight teaspoonfuls of flour, half a nutmeg, grated, and sugar to taste. Pour the mixture into a bowl and tie a buttered cloth over it. Put it into a pot of boiling water and boil half an hour. Serve with wine sauce.

**STEWED RHUBARB.**—Wash the stalks and peel them or not, just as you prefer. Not peeled it makes a richer but not as handsome a sauce. Cut them into inch pieces, cover them with sugar, and let them stand a little while to extract the juice. Cover close, and cook *slowly* until tender, but not long enough to break the pieces.

**MAITRE D'HOTEL BUTTER.**—Put a quarter of a pound of fresh butter into a bowl with one heaping tablespoonful of chopped parsley, the juice of two lemons, half a teaspoonful of salt and a quarter of that quantity of white pepper. Mix these ingredients to a cream and put in a cold place till required. This is an excellent sauce for broiled or fried fish and meats.

**MACKEREL AU BEURRE NOIR.**—Split the mackerel open at the back, season with a little salt, pepper and butter it all over, lay it upon a gridiron over a moderate fire, turning it when about half done. Cook it about a quarter of an hour. When done place it on a hot platter. Then put six ounces of fresh butter into a stewpan over a hot fire and cook until the butter becomes black but not burnt, then throw in about fifty leaves of parsley, which fry crisp and pour over the fish. Put three tablespoonfuls of vinegar into the stewpan, let it boil half a minute, season with pepper and salt and pour this over the fish also. Then put it into the oven for five minutes and serve very hot.

##### A Sufficient Sign.

No doubt, when one is reforming from bad habits, he should reform altogether. So, at least, thought an old lady who was opposed to the use of tobacco when she saw an ex-drunkard, who vaunted his repentance, smoking a pipe.

"I am a brand plucked from the burning," said the reformed man.

"Anybody might know that," said the old lady, "for you're smokin' yet!"

Heardso: "They say every hearty laugh adds a day to one's life." Saidso: "That depends; I had at least a week kicked out of me for laughing at a man who fell in the mud."—*Pearson's Weekly.*

Highest of all in Leavening Power.—Latest U. S. Gov't Report

**Royal Baking Powder**  
ABSOLUTELY PURE



## Patrons of Husbandry.

Observations by Mr. Ohleyer.

Speaking quite favorably of the proposed farmers' and Grangers' summer camp ground in the Santa Cruz mountains, the San Francisco *Call* of a recent date contains the following:

It is both surprising and gratifying to observe that the old comprehensive Order, the Patrons of Husbandry, has come forward to supply the one lack that is left. Though originally inspired by political aims, it is now that the Order has determined to begin at the ground and educate its members in the practical elements of success.

Then it commends the proposition of calling on the professors of the State University for instructions during the encampment. The reference is made with the best of intentions, and yet in a patronizing way intimating that since the members had eschewed politics they were ready to begin the ground work of their calling.

Now, while there is no end to education and experiment in agricultural lines, it stands as an incontrovertible fact that the science of agriculture has been advanced by the Grangers and farmers of the State to a point equal or beyond that of any other State in the Union. It is not my purpose to refer to their accomplishments in detail—the fact is sufficiently pronounced in all directions. And yet when all is learned that can be theoretically, the "plow, spade and hoe" must work out the ever recurring problems confronting the "Husbandman." The political reference by the *Call* is not justified by the facts of history. The aims of the Order were not political but fraternal and educational. Its Declaration of Purposes promulgated nearly a quarter of a century ago with reference to politics reads as follows:

We emphatically and sincerely assert the oft-repeated truth taught in our organic law, that the Grange—national, state or subordinate—is not a political or party organization. No Grange, if true to its obligations, can discuss sectarian or partisan questions, nor call political conventions, nor nominate candidates, nor even discuss their merits in its meetings.

Though all members are conjured to take a deep interest in political affairs, with a view to the correction of abuses. Possibly this is all that was contemplated by the *Call*, though susceptible of being construed in a broader sense.

The universal sentiment just now, as expressed by the city press, is to support home industries, to buy only California made goods of California merchants; and, really, it is a commendable theme so long as we practice what we preach. But recently a gentleman hailing from San Francisco came around to a side entrance of our abode in quest of the man of the house, ostensibly for information concerning a relative who had at one time resided on the western slope of the Sierras, to whom a fortune was awaiting way back in the States. The writer was supposed to be able to furnish the coveted information, but unfortunately he could not. The man looked sad and disappointed; then he went on to say, incidentally to his search for the rich relative, he was taking orders for groceries for a San Francisco supply house, and that shortly after he had made his rounds the goods would be shipped to each individual subscriber when he could pay for the same and take them away. Now, the man was perfectly sincere, as any man would be that wore a doleful countenance occasioned by the loss of a rich relative, and a beard that reached down to the bottom of his vest. He was ready to take an order of any size, if we couldn't make a dicker about the relative, so I just asked him if he was a resident of the country. He said no. Then I asked him if he paid taxes here. He said no. I again asked him if he helped to support our local and county governments, our schools and churches and hospitals. Of course, he said no—or would have said so if he had spoken. I then asked if he did not think it would be wrong for me to give him a cash order for a bill of goods; and for anything else I might want ask the coun-

try merchant for time. The dialogue came to an abrupt termination by his taking suddenly to his vehicle and the road.

Something like this system is in practice among the Grangers in Pennsylvania, and to a limited extent in California with this difference: my caller carries the system to the country, while the former send to the city houses direct. It will readily be observed that with the best of faith, and most honorable intercourse, the business is done on a *dead sure cash basis*; hence business can be done on the smallest possible margin. We are not advised as to the effect on country merchants and country buyers in Pennsylvania, but this system fully carried out in California would depopulate our towns, destroy entirely our country markets and cause the farmers to have to send to the city for every commodity. The charge that country merchants exact higher prices than city stores is true only to a small extent. I have even found the country storekeeper willing to divide his profits with the cash buyer. Let the farmers generally, but particularly the Grangers, for whom this is specially suggested, bunch their cash orders and influence, then go to the local dealer and they will be surprised at the result.

Besides this, another good result will flow from this practice. Every individual or organization will become popular at home and any scheme or desire to overthrow them or to render the "horrid Grangers" unpopular will be abandoned or fail to take root.

It will be remembered that no objections are made against Grange stores as such, because they too are compelled to observe business rules; but only to the city buyer for cash and the country buyer on credit. The latter is bound to remunerate his friend for the time extended, hence the disparity in prices.

Patrons, we need friends in country and town to strengthen our Order. Let us buy of those who buy of us; those who purchase our produce. We cannot injure the city merchant, because we sustain his market when we support the country retailer. The fact that city merchants are accessible is sufficient guarantee against country extortion.

The writer receives almost weekly "sample copies" of Eastern agricultural publications; and they are first class, too, for the locality in which they are published, but for the Grangers and farmers of California they furnish but little if any information useful to the tillers of the soil. Their current topics treat of frost, ice, snow and budding trees; of the loss of life and property by the latest tornado; of drouths in one section and of the reverse in another. Those excellent journals have never learned that absence of natural moisture in California is supplied artificially by the plow and superior cultivator. To them and their Eastern readers it seems nothing less than a miracle to be told that corn can be and is planted and grown after the last spring shower without rain or irrigation, until it is gathered from the fields. They cannot understand how the moisture can be kept so near the surface by cultivation and without rain, and why fruits and vines flourish so well in our rainless climate. Of course, they cannot advise their California readers and are of little value to our farmers. What we most require is a record of agriculture as practiced on the Pacific coast, which we are getting through agricultural and horticultural associations, and through journals published in their interest in the vicinity.

That was an interesting contribution by Mr. Daniel Flint on the subject of the forage plant known as alfilarilla or fillaree for short. I have never seen it elsewhere but in California. To my notion it is a vegetable coquette. No one can predict its appearance, but when it does appear its beauty and value lead you to wish to possess it when it again departs, to appear unnumbered years hence. It is abundant this season in uncultivated fields where

none was seen last season. If it can be grown as a forage plant, its value could hardly be overestimated. Who can enlighten us on the subject?

The progressive Granger, being ever on the alert for enlarged markets for his product, will be interested in the following item going the rounds of the agricultural press:

Miss Lillian Russell keeps, it is said, a dish of boiled carrots on her dressing table, which she eats instead of candy. She does this for the benefit of her complexion.

What a tremendous opening for our carrot crop, my brethren, when the above shall become known in our cities and large towns! Of course, our matrons do not require the remedy, their complexions being always perfect.

If the Massachusetts speculators who were swindled by a salted gold mine in California had put their money in California orchards, they might have been picking the gold from the trees.—Ex.

Man that is born of woman—not the New Woman—is of few days and full of trouble, and it is scarcely worth while to be born any more. He cometh up as a hollyhock in the morning and at night he is cut down by the bill collector—and where is he? Yea, verily he is not in it.—Fresno Expositor.

The horse-raising industry is only lacking in one element at the present time to enjoy a genuine boom. If to the recent horse-canning industry could only be added a horse appetite, and that could be elevated to the degree of a fad, great wealth would immediately be in store for the owners of stock now almost worthless.—Prineville, Or., Review.

Wheat was cultivated B. C. 2700, in China, and at that date was deemed the direct gift of the gods.

Helen Gould is said to have presented the University of the City of New York with \$1,000,000 on the condition that the name of the donor should not be revealed. Have you another million, Helen? Just come this way; we won't tell. G. O.

Yuba City, June 3d.

### Tulare Grange.

The semi-monthly meeting of Tulare Grange was held on Saturday afternoon, the 1st.

Bro. Forrer's meteorological observations report for May showed .60 of an inch of rainfall.

The committee appointed at last meeting of the Grange to enquire as to the propriety of putting a Grange float in the Fourth of July parade at Visalia made partial report and were given until next meeting for final report.

Bro. Forrer made an interesting address on the army worm, now so destructive to alfalfa, vines and the foliage of young trees. The worm generates in alfalfa in immense numbers, and crawls from there to adjacent orchards and vineyards. Bro. Forrer has killed between three and four hundred from one vine. No attempt at poisoning has been successful; each vine and tree has to be examined and the worms picked or shaken off and killed. The best preventive to the worms getting into the orchard or vineyard is a ditch of water or a ditch in dry, loose, sandy land with steep sides next the vineyard up which the worms cannot crawl. The burning of a windrow of straw or trash between the vineyard and field from which the worms come will for a time stop them. The worms last about two weeks, according to the season. The army worm, a long black or brown fellow, first appears and stays on the vines or trees all day. They are readily shaken from tree or vine and killed. In a short time after one is killed it will be surrounded by many more. Next comes the cutworm, adhering more tenaciously to leaf or stem, but feeding only in the night time, burying itself in the loose, damp ground adjacent to the trunk of

(Continued on page 366.)

WHAT WE  
SAY WE DO  
WE DO DO

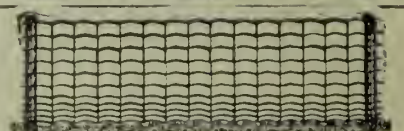
"He had an honest look."  
You've heard of him.  
Perhaps you've seen him.  
Possibly you've dealt with him.  
And you're sorry for it now.  
Still you've learned something.  
You're never going to forget what it was that caught you.  
It was *that honest look*.  
In buying your harvesting machinery don't put too much confidence in an honest look.

**McGORMICK**

light-running steel binders and mowers not only have the honest look, but they have something better—reputation—character. This they have earned by long years of public service. There's stability in the very name "McCormick" and machines having that name can not be sold as cheaply as others, because they have other and more intrinsic value than "an honest look."

Seen a McCormick Catalogue?  
There's an agent in your town—ask him for one.

WHAT WE  
SAY WE DO  
WE DO DO



### Don't Put a Tramp in Charge.

If obliged to employ one, give him a position where it will not harm you if he "goes wrong." Many farmers have lost heavily trying to save money on wages, so also on wire fences. Soft wire is **CHEAP** but non-elastic. It appears to work well while you are watching it, but when your back is turned it gives you the slip. It is safer to require references, and the best in the world are furnished by the

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

### "INDURINE" COLD WATER PAINTS.

A Most Remarkable Material is the **OUTSIDE INDURINE**. It stands rain and exposure as well as oil paint and costs only a fraction as much. It is just the thing for fences, outbuildings, factories, etc., being cheap, durable and easily applied by anyone.

It has no equal as a light reflector for light-shafts and court-yards of large buildings. It is supplied in a thick paste, to be diluted with cold water. It is made in white and several colors.

**INSIDE INDURINE** is designed especially for factories, stables, and general inside work, as a substitute for white wash, kalsomine or oil paint.

It will not rub or scale, soften or darken with age, and works well over old whitewash. A dry powder to be mixed with cold water.

Both Indurines are perfectly fire-proof.

Send for circular and prices to

WM. BURD, MANUFACTURER,

Mills Building, San Francisco, Cal.

### MOORE, FERGUSON & CO.

WOOL, GRAIN, FLOUR

General Commission Merchants.

310 CALIFORNIA ST., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

**SPRAINS** POSITIVE  
**and NEURALGIA'S** (CURE)  
**ST. JACOBS OIL**



## S. F. MARKET REPORT.

## Market Review.

SAN FRANCISCO, June 5, 1895.

**FLOUR**—We quote: Net cash prices for Family Extras, \$3 40@3 50 per bbl; Bakers' Extras, \$3 30@3 40; Superfine, \$2 25@2 50 per bbl.

**WHEAT**—No. 1 Shipping Wheat is quotable at 87½¢ per cwt, with 88½¢ for choice. Milling Wheat keeps steady at 97½¢@1 per cwt.

**BARLEY**—Feed, fair to good, 57½¢@62½¢; choice, 57½¢@65¢; Brewing, nominal.

**OATS**—We quote: Milling, \$1 05@1 15; Surprise, \$1 10@1 15; fancy feed, \$1 02½@1 07½; good to choice, 95¢@1; fair to good, 90¢@95¢; poor to fair, 87½¢@90¢; Black, nominal; Gray, 92½¢@97½¢ per cwt.

**CORN**—We quote: Large Yellow, \$1 10@1 12½; small Yellow, \$1 12½@1 15 per cwt; White, \$1 05@1 12½.

**RYE**—Quotable at 87½¢@90¢ per cwt.

**BUCKWHEAT**—Quotable at 85¢@90¢ per cwt.

**OILCAKE MEAL**—Quotable at \$25 per ton from the mill.

**COTTONSEED OILCAKE**—Quotable at \$24 per ton.

**MIDDLINGS**—Quotable at \$18@19 per ton.

**BRAN**—Quotable at \$13@14 per ton.

**GROUND BARLEY**—Quotable at \$14 50@15 50 per ton.

**HAY**—New Wild Oat selling at \$6@6 50 per ton. We quote as follows, old: Wheat, \$7@11; Wheat and Oat, \$7@10 50; Oat, \$7 50@10; Alfalfa, \$7@8 50; Barley, \$7@8 50; Clover, \$7@8; Compressed, \$7@9 50; Stock, \$6@7 per ton.

**STRAW**—Quotable at 50¢@75¢ per bale.

**BEANS**—We quote as follows: Bayos, \$1 30@1 55; Butter, \$1 75@2 for small and \$2@2 25 for large; Pink, \$1 20@1 35; Red, \$1 30@1 50; Lima, \$1 25@1 40; Pea, \$2 50@2 75; Small White, \$2 50@2 80; Large White, \$2 50@2 75; Blackeye, \$3@3 50; Red Kidney, \$2 50@3; Horse, \$1 60@1 70 per cwt.

**SEEDS**—We quote as follows: Mustard, Brown, \$1 25@1 75; Yellow, \$1 75@2; Triesie, \$1 90@2 00; Canary, 3¼¢@4¼¢; Hemp, 3¼¢; Rape, 1¼¢@2¼¢; Timothy, 5¼¢@6¼¢; Alfalfa, 7¼¢@7¾¢ per lb; Flax, \$2 50@2 75 per cwt.

**POTATOES**—Quotable at 35¢@55¢ per cwt for new crop; old, 35¢@50¢.

**ONIONS**—Quotable at 35¢@40¢ per cwt.

**VARIOUS**—We quote: Summer Squash, 40¢@60¢ per small box; Bay Squash, large box, \$1 00@1 25; Cucumbers, Marysville, \$1 25@1 50 per box; Asparagus, 75¢@1 25 per box for ordinary and \$1 25@2 for better qualities; Rhubarb, 35¢@65¢ per box; Los Angeles Tomatoes, \$3 50 per box; String Beans, 3¢@4¢ per lb; Refugee, 4¼¢@5¢ per lb; Wax Beans, 4¢@5¢ per lb; Green Peas, 75¢@1 per sack for ordinary and 2¢@2½¢ per lb for garden; Turnips, 50¢ per cwt; Beets, 60¢ per sack; Carrots, 40¢@50¢; Cabbage, 65¢@75¢ per cwt; Garlic, new, 5¢@6¢ per lb; Cauliflower, 50¢@60¢ per dozen; Dried Peppers, 11¢@12¢ per lb; Dried Olives, 15¢ per lb.

**FRESH FRUIT**—Apples—Quotable at 50¢@65¢ per box for new, being green.

Apricots—Quotable at 35¢@60¢ per box for Pringle and 60¢@1 per box for Royals.

Berries—Gooseberries, 1¼¢@2¢ per lb; Strawberries, Sharpless, \$2 50@3 50 per chest; Longworth, \$5@7; Raspberries, 40¢@50¢ per drawer and 75¢@1 25 per crate for Newcastle.

Cherries—Quotable at 50¢@65¢ per box for red and black, and 35¢@60¢ for white.

Currents—Quotable at \$2 50@3 50 per chest.

Peaches—Quotable at 50¢@1.

**CITRUS FRUIT**—We quote: California Navels, 75¢@1 50; Seedlings, 50¢@1; Mexican Limes, \$4@4 50 per box; Lemons, Sicily, \$3 75@4; California Lemons, \$1@1 50 for common and \$2@2 50 for good to choice.

**DRIED FRUIT**—Following are the prices furnished by the San Francisco Fruit Exchange. The figures presented represent carload lots, smaller parcels occasionally selling at slightly lower rates:

Apricots—Fancy Moorpark, 8¢; choice, do, 7¢; fancy, 7¢; choice, 6¢; standard, 5¼¢; prime, 5¢.

Apples—Evaporated, 4¼¢@5¼¢; sun-dried, 4¢@4½¢.

Peaches—Fancy, 7¢; choice, 5¼¢; standard, 5¢; prime, 4¼¢; peeled, in boxes, 12¢@13¢.

Pears—Fancy, halves, 5¢; quarters, 4¢; choice, 4¢; standard, 3¼¢; prime, 3¢.

Dried Grapes—1¼¢ per lb.

Plums—Pitted, 3¢@4¢; unpitted, 1¢@2¢.

Prunes—Four sizes, 4¢.

Nectarines—Fancy, 6¢; choice, 5¼¢; standard, 5¢; prime, 4¢.

Figs—White, choice, 3¢@5¢; black, choice, 2¼¢@3¢.

Raisins—In sacks (50-lb. boxes selling at ¼¢ per lb. higher): 4-crown, loose, 3¼¢; 3-crown, 2¼¢; 2-crown, 2¢; seedless Sultanias, 3¢; seedless Muscatels, 2¢ per lb; 3-crown London Layers, \$1 40 per box in 20-lb. boxes; clusters, \$2; Dehesa clusters, \$2 50; Imperial clusters, \$3; 4-crown, loose, \$1; 4-crown, loose, faced, \$1 15 per box.

**NUTS**—Chestnuts, 3¢@5¢; Walnuts, 6¢@7¢ for hard shell, 7¢@9½¢ for soft shell and 7¢@9½¢ for paper shell; California Almonds, 9¢@10¢ for soft shell, 2¢@2½¢ for hard shell and 6¢@7¢ for paper shell; Peanuts, 3¼¢@4¼¢ for California and 1¢@5½¢ for Eastern; Pecans, 6¢ for rough and 8¢ for polished; Brazil Nuts, 7¢@7½¢ per lb; Cocoanuts, \$1 50@5 50 per 100; Pine Nuts, 20¢ per lb.

**HONEY**—We quote: Comb, 9¢@10¢; water-white, extracted, 5¼¢@6¢; light amber, extracted, 5¼¢@6¢; dark amber, 4¢@5¢ per lb.

**BEEWAX**—Quotable at 26¢@28¢ per lb.

**BUTTER**—Creamery—Fancy, 12¢@13¢; seconds, 11¢@11½¢ per lb.

Dairy—Fancy, 10¢@11¢; fair to choice, 8¢@9¢; store lots, 7¢.

**CHEESE**—We quote: Choice to fancy, 5¼¢@6¢; fair to good, 4¢@5¢; Eastern, ordinary to fine, 10¢@14¢ per lb.

**EGGS**—Quotable at 12¢@13¢ per dozen for store and 13¢@15 for ranch.

**POULTRY**—We quote as follows: Live Turkeys—Gobblers, 12¢@13¢; Hens, 12¢ per lb; Roosters, \$5@5 50 for old, and \$8@10 for young; Broilers, \$2 50@4 for small and \$5@6 for large; Fryers, \$6@8; Hens, \$4 50@5; Ducks, \$4@5 for old and \$4@6 for young; Geese, \$1 25@1 50 per pair; Goslings, \$1 25@1 50; Pigeons, \$1 75@2 per dozen for old and \$1 50@2 for young.

**HIDES AND SKINS**—Quotable as follows:

|                                  | Sound. | Culls. |
|----------------------------------|--------|--------|
| Heavy Steers, 56 lbs up, per lb. | 8 @—   | 8 @—   |
| Medium Steers, 48 to 56 lbs.     | 8 @—   | 7 @7½  |
| Light, 42 to 47 pounds.          | 7 @7½  | 6 @6½  |
| Cows, over 50 lbs.               | 8 @—   | 7 @—   |
| Light Cows, 30 to 50 lbs.        | 7 @7½  | 6 @6½  |
| Stags                            | 5 @—   | 3 @—   |
| Kips, 17 to 30 lbs.              | 7 @6   | 6 @—   |
| Veal Skins, 10 to 17 lbs.        | 8 @—   | 7 @—   |
| Calf skins, 5 to 10 lbs.         | 9 @—   | 8 @—   |

Dry Hides, usual selection, 16¢; Dry Kips, 12¢@13¢; Calf Skins do, 19¢@14¢; Cull Hides, Kip and Calf, 9¢@11¢; Pelts, Shearlings, 10¢@20¢ each; do, short, 25¢@35¢ each; do, medium, 30¢@45¢ each; do, long wool, 40¢@60¢ each; Deer Skins, summer,

30¢; do, good medium, 15¢@25¢; do, winter, 10¢@15¢ per lb; Goat Skins, 20¢@35¢ apiece for prime to perfect, 10¢@12¢ for damaged, and 5¢ each for Kids.

**WOOL**—The following is from Thomas Denigan Son & Co.'s review of the Wool situation:

The one redeeming feature to our local Wool market so far this spring has been the continued demand for all fairly good spring Wool. Of course prices are so low as to prove terribly discouraging to those who are in the business, and the low prices ruling for mutton makes it still harder for growers to accept the situation. A quick market for Wool, however, has been very satisfactory to grower and merchant alike. It furnishes the former with a little money to pay expenses, and it indicates that dealers in Wool have arrived at the conclusion that Wool will go no lower, and that those interested have seen the worst of the storm. Shearing is in full blast now in Utah, Oregon, Washington, Montana, Wyoming and Texas. Several of our local operators are now canvassing the districts named, and we learn that trading is somewhat different, for the reason that growers express more hope for the future and are inclined to hold firm for better prices. At the same time the seaboard markets are unchanged and quoted rather dull than otherwise, with no large business being done. So soon, however, as the West and Northwest market their Wool there will then be more business in the chief manufacturers' markets.

The London sales are closed for the May series, and results seem to point to rather a stronger market for the July sales.

The local scourers bought very largely up to the middle of May. For the moment they are not buyers and will not be, to any extent, until they have worked up their purchases referred to. We cannot quote any better prices for scoured Wool, and scourers can get no advance bids on their April and May transactions, and in fact the scourers will not believe that Wool has any better future now than it has for several months.

Sales of grease Wool for the past week have been very light.

We quote spring:

|                                            |         |
|--------------------------------------------|---------|
| Year's fleece, San Joaquin, per lb         | 6¢@8½¢  |
| 5 to 8 months do                           | 7¢@8½¢  |
| 6 to 8 months Calaveras and foothill, free | 8¢@10¢  |
| Do, defective                              | 4¢@6¢   |
| Northern, good to choice                   | 8¢@11¢  |
| Do, defective                              | 6½¢@8½¢ |

We quote Nevada spring:

|                  |        |
|------------------|--------|
| Light and choice | 8¢@10¢ |
| Heavy            | 6¢@8¢  |

HOPS—Quotable at 4¢@6¢ per lb.

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HAY, HOPS, WOOL  
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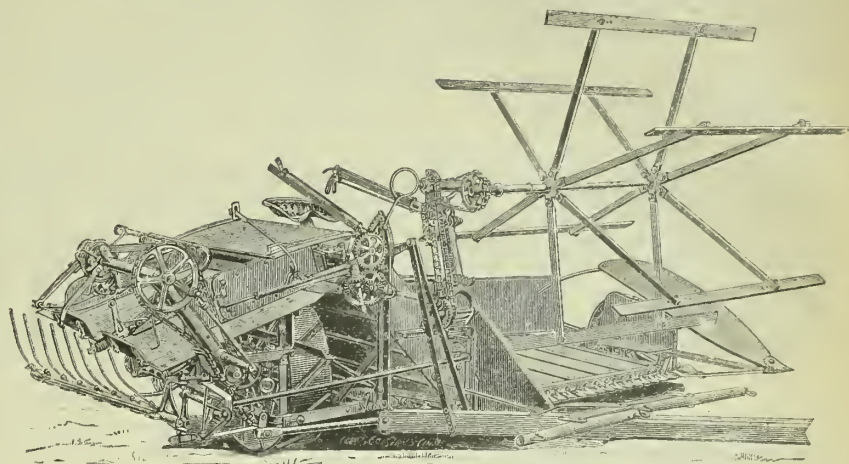
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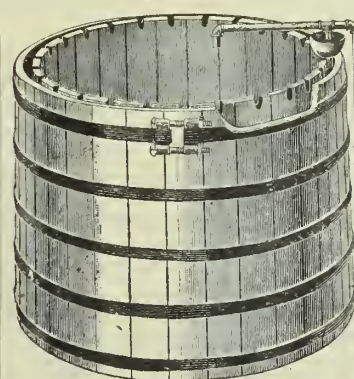
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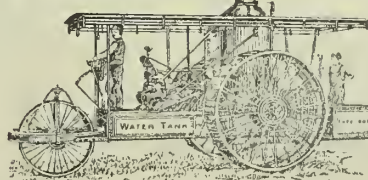
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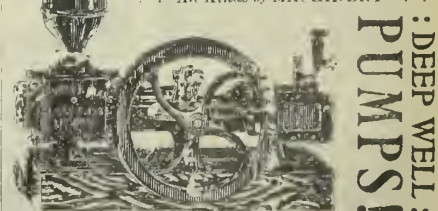
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## Tulare Grange.

(Continued from page 364)

the vine or tree during the daytime. Later comes a light green worm of smaller size. These worms come only periodically, in favorable seasons, and are very destructive to alfalfa, where, for the most part, they generate. In 1879 they were very bad, but since the U. S. Experimental Station was established in Tulare, six years ago, they have not been as bad as they are this year.

Sister Gill reported all her own and her neighbors' watermelons, but not muskmelons, eaten by slugs.

At the next meeting of the Grange the subject for consideration will be, "Is labor necessary for the highest development of character?" It is expected the consideration of the subject will lead to a general discussion and a free interchange of opinions.

J. T.

## The Grange and Its Present Need.

TO THE EDITOR:—To solve a problem of so great a magnitude as heads this article will not be the task of the writer on this occasion, but rather to suggest some work to be done which could be considered as supplementary to the work that has recently been done in the lecture field by Grange inspection. It has been conceded by all, so far as the knowledge of the writer extends, that that work was well done and has created considerable interest in some places and genuine enthusiasm in others.

It would be suicidal, now that the work the Inspectors were sent out to do is completed, to sit down quietly and allow the good work already done to die out. As supplementary to the work just completed nothing suggests itself with greater force than that the Grangers, Granges and the Executive Committee do what they can to make a success of the summer encampment projected by Highland Grange. As a lecture field the audiences the Inspectors addressed were comparatively small to the number that will greet the speakers at the encampment grounds.

In the first place, some of the best talent of the State have signified a willingness to lecture before the farmers at the camp. Second, among the listeners will be those who are not as well as those who are Grangers, and at a place where the listener will not have his thoughts diverted from the subject by revolving in his mind the chores he must do at night after returning home and wishing the speakers would cut it short. When a person is in that state of mind an afternoon's meeting will not do much good. But when on the camp grounds for several days or a week or two to devote to education, to health and cultivating the social side of our nature will be real enjoyment. Third, it has been said, and is undoubtedly true, that camping at Highland will be inexpensive, yet the hills are dotted with farm houses where rooms and board can be had by those who do not wish to camp.

In reaching the proposed camp grounds from the main road it is necessary to cross a deep ravine. To cross that and to erect a platform for the exercises to be conducted on will require about two or two hundred and fifty dollars' worth of lumber. This amount Highland Grange will have to raise from its scant membership unless aid comes to them from outside of their Grange.

Is it not within the province of the Executive Committee to appropriate say \$250 for lecture purposes at Highland, to be used to make the grounds accessible and to erect a suitable platform for lectures to be delivered from?

This action would be in line with what has just been done. Railroad fare, expense of teams and other incidentals were paid by the Executive Committee from the Lecture Fund to get the speakers to their audiences. In this instance the money would be paid,

not to railroads to get speakers to their audiences, but to erect a suitable place for the people to listen to speakers, who come free. The object of our lecture fund is to promulgate the principles of our Order among the people, with a view of building it up. The difference between paying the expenses of speakers in reaching their audiences and paying the expense of erecting a suitable place for the speakers to address their audiences from is not discernible to the writer, and we will presume there will be no hesitation on the part of the Executive Committee in making the appropriation, and as time is an important factor in this case, if the grounds are to be put in order by the 1st of July immediate action on the part of the Executive Committee will be necessary.

The lectures to be delivered at the camp ground will reach the farmer who may not be a Granger, and unlike some, at least, of the lectures delivered by the Inspectors, which were given to members only. But at the camp grounds all outsiders, as well as Grangers, will have an opportunity of learning the principles of our Order. We clip the following from this morning's San Jose Mercury, which is appropriate on this occasion:

LOS GATOS, June 2.—What may be called a mass meeting of the residents around Skyland and the summit took place at the ranch of E. F. Adams at Skyland yesterday for the purpose of forming a summer camp under the direction of the State Grange. Both the ranch of Mr. Adams and the adjoining one of C. H. Allen are magnificently situated and thoroughly adapted to the purpose, as one of the finest views imaginable can be obtained from them, commanding, as they do, the entire sweep of country from there to and including Santa Cruz, Monterey and the bay. The trees are of immense proportions, affording ample and delightful shade from the summer suns; fresh mountain water flows in greatest abundance, and, too, there are other inducements in the way of fishing and hunting.

It is contemplated by the promoters that, if the scheme proves successful, they will erect a school building suitable for children whose parents have gone into camp on the grounds, and have it conducted by the professors of Stanford University, whom they expect to give lectures of value to both old and young alike on the subjects of economic and agricultural topics.

The action of Tulare Grange in regard to the summer encampment is commendable. But what else could we expect from one of the most active and progressive Granges in the State, and one that is always up to date? No Micawbers there, waiting for something to turn up.

Several other Granges have spoken well of the project, and with a little aid from the Lecture Fund success is certain, without involving the existence of Highland Grange by taking too great a load on its shoulders.

AMOS ADAMS.

San Jose, June 3, 1895.

## Bennett Valley Grange Anniversary.

One who was there writes as follows of the picnic given on May 25th by Bennett Valley Grange, the occasion being the 25th anniversary of its organization:

The races in the morning gathered a large crowd, and many beautiful prizes were hotly contested for. A number of the prizes went to Glen Ellen grangers, although the bachelor race prizes remained at home. Glen Ellen and Santa Rosa Granges were both well represented.

In the afternoon dancing was the principal feature. This was especially interesting when it came to contesting for the waltz prize, a handsome pair of lady's ties. This trophy fell to Miss Ellen Durant of Glen Ellen.

The winners in other contests were: Ed Lague, Miss Alice Preston, Miss Georgie Pederson, C. T. Clawson, Leslie Talbot, Fletcher Gaddis, Miss Georgia Kramer, Ben Hall, Ed Bremner, Miss Nellie Keppel, Ed Phillips, Miss Lizzie Beatty, Miss Mary Scheibel, Joe Cook, Miss Rina Driscoll, Newton Cook, Miss Olive Allen, Mrs. F. Cook, Ferdinand Scheibel, Charles Snyder, Price Brown, Jefferson Cook, J. M. Talbot and D. M. Bremner.

Although Bennett Valley Grange has always a disagreeable day for a picnic,

those who come through fog and rain are always well entertained. Had Saturday been a fair day the grounds would have been crowded. As it was, nearly two hundred persons were present.

There is more Catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease, and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven Catarrh to be a constitutional disease and therefore requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from ten drops to a teaspoonful. It acts directly on the blood and mucous surfaces of the system. They offer one hundred dollars for any case it fails to cure. Send for circulars and testimonials. Address, F. J. CHENEY & CO., Toledo, O.

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## List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey &amp; Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING MAY 21, 1895.

539,905.—SURVEYING INSTRUMENT—Batter & Murphy, Marshfield, Or.  
 539,765.—EDGING BOXES WITH METAL—M. A. Clemen, S. F.  
 539,511.—SIGNAL BOX—A. Gruner, S. F.  
 539,512.—RELAY—A. Gruner, S. F.  
 539,737.—TREASURE GUARD—R. A. Hahersham, Portland, Or.  
 539,741.—HINGE—W. L. Ingram, Grants Pass, Or.  
 539,538.—BALING PRESS—J. J. Mathias, Mountain View, Cal.  
 539,485.—PILE COVERING—J. Berret, Everett, Wash.  
 539,545.—CLOSING, ETC., ENDS OF CANS—A. J. Ritter, Mammoth, A. T.  
 539,455.—SACK FILLER AND SEWER—A. T. Timewell, Spokane, Wash.  
 539,461.—CINCH PLATE—A. P. Weeks, Santa Cruz, Cal.

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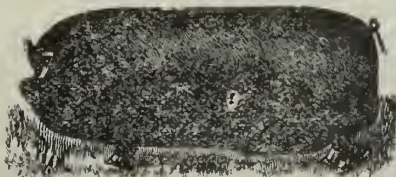
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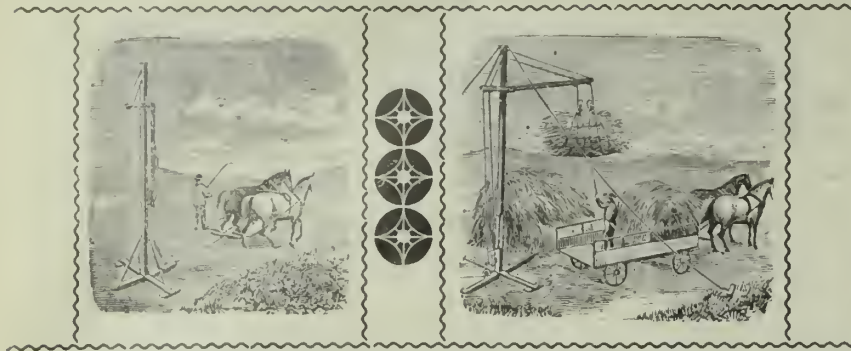
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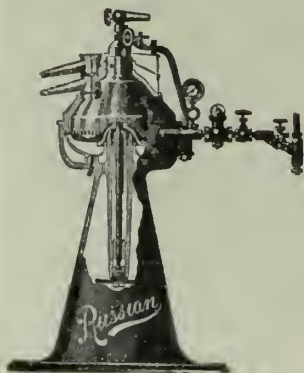
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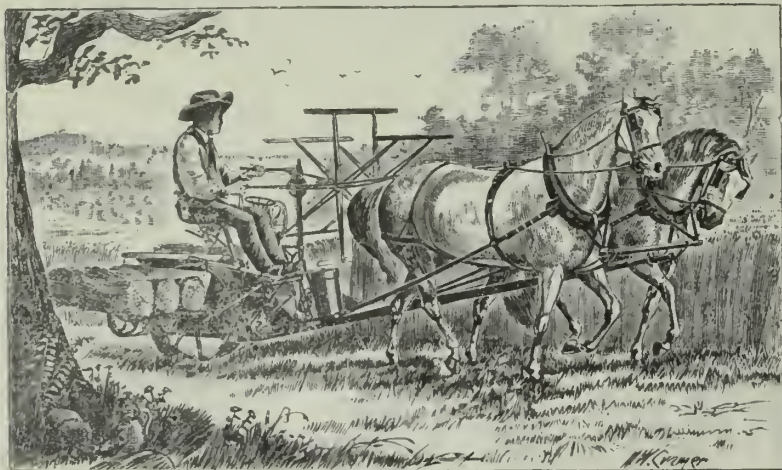
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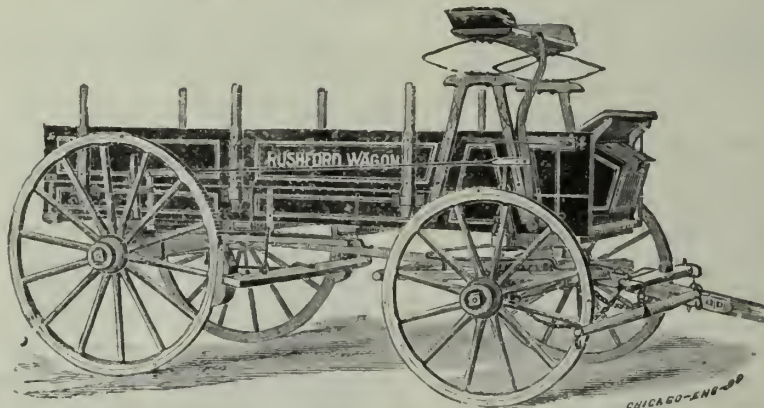
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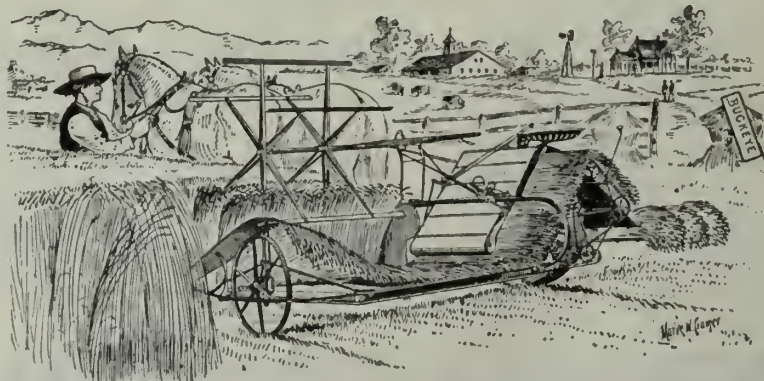
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AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 24.

SAN FRANCISCO, SATURDAY, JUNE 15, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

## The University of California.

Our illustration on this page presents a picturesque view of the University of California. It only gives glimpses of a part of the buildings, but it shows the hill region of the environment of the University better than other views which have previously appeared on the pages of the RURAL. The hill views around Berkeley always strongly appeal to the visitor, and they are a constant delight to the resident. Although the outlook from the University

doubled in number, and yet the institution, though using every foot of available space to pursue its work, is overcrowded and seriously needs enlarged accommodations. This is clearly explained by the fact that nearly 1100 students attended the classes in Berkeley during the last year—twice as many as four years ago. The last Freshman class numbered upward of 400, and quite as large an incoming class is expected this year. This great progress shows how widely the University has been popularized during recent years and how the desire for higher

upon the secondary schools of the State has produced notable changes. High schools have been multiplied and the character of instruction in them has been greatly improved. The system of visitation of these schools by the University instructors, and the admission without examination of pupils of lower schools wherever instruction is found to be satisfactory, has brought to these schools the highest grade of instruction and has at the same time stimulated in a wonderful degree the determination of the pupils to press onward and enjoy the most advanced



THE UNIVERSITY OF CALIFORNIA AT BERKELEY, FROM THE HILLS NORTH OF THE UNIVERSITY GROUNDS.

site westward over the slope upon which the rapidly growing city of Berkeley is located, and the farther westward view across the Bay of San Francisco and out upon the Pacific through the Golden Gate is the grandest view of the region, the hills immediately around the University site have peculiar charms of their own. Perhaps no institution of learning in the world is more picturesquely situated.

Our view is looking toward the southeast from a slope forming the northerly line of the University property. Both to right and left the University domain extends for considerable distances—in fact, the view covers only about one-third of the two hundred acres which are State property. Parts of three large buildings are shown, but three more of equal dignity are wholly concealed by the trees, and a host of lesser structures are also out of view. The University has, during the last few years, experienced notable expansion. The buildings have been

education has advanced among the people. With her two great universities, one at Berkeley and the other at Palo Alto, California is equipped with facilities for higher education in far greater degree, according to population, than any other State in the Union, and yet both universities are crowded to the doorways. At Stanford a tuition fee is charged, and it is proposed to limit the number of students. The State University Regents are considering the feasibility of making a tuition charge to meet a deficiency in their funds, but there is great opposition to the idea. The establishment of the Stanford University has thus proved no obstacle to the progress of the State University, but the two institutions, by their several efforts for the promotion of the interests of higher education, have developed a demand for instruction which it taxes them both to the utmost to supply.

The reaction of the advance of the university idea

instruction which the State affords. This fact must not only advance the grade of our citizenship, but will give California a reputation throughout the world as the abode of enlightened and educated people, and will draw to our population those who constitute most desirable elements thereof. California has always enjoyed a most unique and attractive position industrially, and her educational character bids fair to be in its way quite as marked and attractive.

The progress of the State University is exerting a profound influence upon the development of Berkeley. From a population of about 2500 in 1880 it has advanced to 12,000 in 1895, and has just assumed the city form of government. The schools of Berkeley, as might be expected, are keeping pace with advancement of the University. Of fifty-three graduates from the Berkeley High School this year, forty-two enter the University.



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ALFRED HOLMAN.....Editor.  
E. J. WICKSON.....Special Contributor.

San Francisco, June 15, 1895.

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## The Week.

### Weather and Crops.

We have had too much north wind during the last week to suit most people who have crops out of doors. It has been largely productive of "dry feed" in the pastures, and has unduly hastened the ripening of much grain. It has been rather rough with the fruit-laden branches, too, in some localities. Other ills include the "hoppers," which have done for some of the foothill and adjacent regions what caterpillars have accomplished on the plains of the interior valley. Still the evils have been of moderate extent and not greater than are customary drawbacks to a good year. If the producer can realize a little in the way of better values, which seems to be promised, he will forget all the ills of the season. Fruit is now going forward at a rattling rate, and yet the season is but just opening. Everything still looks favorable in this line of marketing.

### Nothing in Horse Beef.

Much was lately printed about the chance for growing horse flesh in the West for export to Europe.

The accounts seem to have been largely imaginative. The Department of Agriculture, after investigations in the probabilities of a market for horse flesh in France, Germany and Austria, the only countries in which it seems to be used for food, reports that there is no prospect of such a market to any extent. Over 100,000 horses were killed in France last year for food purposes, but the statistics show that while in 1891 25,000 pounds of horse meat were imported into the country, that amount decreased in succeeding years until in 1894 there was none imported, showing that the domestic supply of animals was sufficient for the demand. Then the prices paid for the meat were not large. They ranged from 5 to 6 cents a pound, while for pork 10 to 11½ cents a pound was paid, for beef 11½ to 14½ cents and for mutton 14½ to 18 cents. Besides this, a duty of \$2.19 per 100 pounds is imposed. The same condition of things practically exists in Germany and Austria, which impose a tariff of \$2.16 and \$1.31 respectively upon each 100 pounds of horse meat. It will hardly prove profitable to grow horses for the flesh.

### Wool Sales.

Another indication of renewed life in wool may be seen in the fact that the Cloverdale wool sales, June 11, were more active than in former years. Buyers were keen, and sellers not inclined to hold. Sales were made quickly. The price ranged from 10½ to 11½ cents. The demand for Mendocino and Sonoma wools is quite brisk. The clip is fine.

### Ancient Butter.

It is a question whether the modern cold storage arrangements are not becoming something of an embarrassment to production by increasing the op-

portunity for speculative holding. It is stated that in New York there are parcels of old butter representing every month of last year's season of 1894, and representing the season of 1893, still stored in the ice tombs, which would average to cost, with interest and refrigerator charges added, say about 18 to 24 cents. This stock could now be sold at prices ranging from 7 to 11 cents, and it is safe to say that these speculators in the holding of butter are out of the game for the coming season. The consequence is that buying is at a low ebb, and the surplus stock is left in the hands of holders, which accumulating, depresses prices.

### Appeal to Supervisors.

A strong effort is being made to continue by private subscriptions and by county appropriations the work which is now left without State aid. A special committee has been appointed by the State Board of Trade to call upon the Governor and request him to call a convention of all the supervisors of the State. The object is to have them pledge a certain sum from each county for the California exhibit at the Cotton States and International Exposition to be opened on September 13th at Atlanta, Ga., and to provide means for carrying on the work of the State Board of Horticulture, which received no appropriation from the Legislature for the next two fiscal years. J. A. Filcher, Mark L. McDonald, L. C. McAfee and Mrs. E. Shields of Sacramento were appointed a committee to present the proposition to Governor Budd. It was little short of a misfortune that the work hitherto done by the State Board of Horticulture was left without means for continuance. Whatever changes were urged by those who desired them, it was by none intended that the work should cease. It is too important and involves too much of our prosperity and future. We trust that some of the measures now proposed will be found adequate and meet with popular support.

### Holding Wheat.

Perhaps some of our readers may be interested in knowing what it costs to hold wheat on a gigantic scale. The final account of the sale of the Fair wheat gives some idea of it. The report to the court shows that 408,483,491 pounds of wheat sold for \$3,489,936.46. Of this amount \$221,533.85 went to pay storage, \$89,720.88 for commissions on sales, and \$26,535.25 for taxes. Almost ten per cent of the purchase price thus went to pay costs of storage, commissions and taxes. When it is also remembered that the wheat sold for 85 cents, which was bought at about \$1.25 per cwt., it appears quite clearly that broad-gauge wheat gambling may be rather costly to the one who indulges.

### Viticultural Commission.

The Viticultural Commissioners propose to go ahead with their work on a basis of reduced expenditures. The salaries of the four employees will be reduced one third and the rent cost will be similarly reduced by using but a portion of the space formerly rented. These changes were decided upon and will go into effect July 1. The following officers were elected for the ensuing year: President, E. C. Bichowsky of San Gabriel; vice-president, I. De Turk of Santa Rosa; secretary, Winfield Scott; chief executive and viticultural and health officer, Clarence J. Wetmore.

### Open Fruit Auctions.

The old issue of whether Chicago auction sales of California fruits shall be open to all who can pay for what they buy comes up sharply again. The California Growers and Shippers' Association say they shall be; the Chicago Fruit Buyers' Association are trying to break down this purpose. The Buyers' Association telegraphed from Chicago to the local association at Sacramento asking for closed auctions in their interest because their merchants purchase 98 per cent of the fruit. Mr. Weinstock replied:

Growers are in favor of open auction and have pledged themselves by resolutions unanimously adopted in State Convention against supporting closed auctions. Besides, cannot understand what 98 per cent has to fear from two per cent of the buyers in fair open competition. Open auctions are, and ever have been, the rule in New York and Boston. Why not in Chicago?

Thus it appears that the California growers and shippers propose to stand by their colors. There is really no other way to do or else they will find themselves again in the hole. If the Chicago buyers should be allowed to rule on their two per cent proposition they would soon have all the rest of it.

### Fruit Without Ice.

Reports received by the railway people seem to indicate the success of their project to substitute quick-time ventilated cars for refrigerators. The first train of ventilated fruit cars with California fruit for the East arrived in Chicago ten hours late. The train, however, was delayed ten hours by a wreck on the railway. The second ventilated fruit train arrived on time in Chicago from Sacramento. It contained fresh fruits in season, and all were in as perfect condition as if they had been kept on ice throughout the journey. The third train with a load

### Fish Law.

The Attorney-General is finding some peculiar law in recent statutes. His filled-cheese decision is one instance of such discovery. The fish law also discloses rare humor. Heretofore when the agents of the Fish Commission found nets illegally used they confiscated them. The fish illegally caught were a puzzle to the officers. It did not seem right that they should sell what was illegally caught nor that they should give it away for that matter. They could not restore it to life and the water. In their dilemma they appealed to Attorney-General Fitzgerald for an opinion, which was furnished them. In acting upon this opinion the Fish Commissioners will have, as formerly, full power to seize nets illegally used, but they will have no right to confiscate them. They may take them away from the fishermen who use them and remove them from the water, but they must leave them on the beach. This means that the fishermen who violate the laws may be sure of the return of their nets. So far as the fish is concerned, the Fish Commissioners have no right to sell it. They may leave it on the beach and any person who so desires may take it. As the fishermen are most likely to be around at that time, they may pick up the fish when the officers retire. So having both nets and fish again after brief interruption by the officers, they may be able to pool issues and make a business good enough to pay fines and a profit also. The next Legislature will probably have to look after this State fish law.

### Popular Pomelos.

Our Florida friends are still exploring the destruction of their pomelo or grape-fruit plantations. They had taken years to teach the northerner that pomelo juice was just the thing for what ailed him in the morning; and as he had become willing to pay long prices for the fruit, the heavy freezing wipes out the plantations. The Florida *Agriculturist* says whether they will preserve and remake their pomelo groves as they were before the freeze remains to be seen. The fruit is gaining much credit in high hygienic circles. The following is from the *Popular Science Monthly*:

Grape fruit, plump and juicy, is in the market again—a harbinger of spring. This fruit is an admirable tonic, as well as a most appetizing breakfast or luncheon relish. A doctor says that the sharp stimulus of fruit is the best thing to set the digestive organs in order for the day, and the peculiar qualities of the grape fruit give it marked medicinal value. When eaten at luncheon, it is prepared in a different way than for breakfast service. For the second meal the contents of the two halves should be scraped out, the seeds and tough cone of dividing skin taken out and the pulp and juice thus obtained used to fill one of the halves, which it will just about do. A tablespoonful of sugar and one of rum or sherry mixed with the juice adds the perfecting flavor. At breakfast, with the long, pointed orange spoon, the meat is eaten out as is that of an ordinary orange, and very little sugar is used, many persons preferring none, on the ground that its full medicinal value is better obtained.

California now has a chance to see what there is in pomelos. Hundreds of acres would have been planted this spring if it had been possible to get the trees of improved varieties.

## Fruits for China.

W. E. Hunt, U. S. Consul to Hongkong, writes to the State Department concerning the market for American fruits at that point. He thinks those who anticipate much from it will be disappointed, although more might be done by having American firms on the ground. American interests and exporters are placed at a disadvantage in comparison with Europeans, owing to the absence of American firms, not only at Hongkong, but in the open ports of China. Although the European and American communities in Hongkong are luxurious in their habits, it is not generally known how small they are. Out of an estimated population of 230,000 there are under the head of Europeans, including Portuguese, 4195. Deducting the mixed race of Portuguese, numbering 2089, as they are too poor to indulge in luxuries, there are only 2106 to be considered as possible purchasers.

Apples exported from the United States in the spring arrive in a damaged condition on account of the climate. Fruit importation into Hongkong from the United States has to compete with pears and grapes from Tien-Tsin and Chefoo via Shanghai (ten days' voyage), pineapples, pumeloes, oranges, lungnan and lichee from Canton, Swatow and Amoy (one to three days' voyage); mangoes from Manila and Amoy (three to five days' voyage); coconuts, pumeloes and mangosteens from Saigon, Bangkok and Singapore (three to six days' voyage); raisins from the Levant, Turkey and the Holy Land (three weeks' voyage).

Canned fruits come to Hongkong chiefly from England, a little from Australia of late years, and very largely from the United States.



## From an Independent Standpoint.

The contest between the free silver element in the Democratic party on the one hand and the Administration on the other continues to be an interesting game of nip and tuck. The effort of the silver Democrats is to head off the projected silver party and to unite all the friends of free silver, including the Populists and the silver Republicans, under the Democratic banner for the Presidential battle of 1896. The effort of the Administration is to hold the party to the gold standard and, so it is declared, to bring all the gold standardists of the country into support of Mr. Cleveland for a third Presidential term. The fight is clearly between the masses of the party and its leaders, and it looks to us as if the former stood the better chance to win. In the States which furnish the Democratic majorities (excepting New York) the silver sentiment is strong, and it will be a very surprising thing if it can be overborne by the weight of Administrative influence. Just now, when the National Convention is far off and the Administration in present authority, the State leaders bow to the latter; but next year they are very likely to harken to the popular voice and leave Mr. Cleveland and his more devoted friends without a following. Indeed, even now the President can hardly be said to have the backing of his party; he stands rather upon the support of those interests, which, independent of party considerations, regard the maintenance of the gold policy of the government as superior to all other considerations. If Mr. Cleveland should again be a nominee for the Presidency, it will not, in our judgment, be as the candidate of the united Democratic party. An indication of popular Democratic feeling has been supplied during the week by a "currency convention," held at Chicago under the auspices of the Illinois Democratic State Committee. The speeches, all made by Democrats, were marked by severe criticism of the Administration; and the resolutions, adopted with tremendous enthusiasm, declared for free coinage in the most positive and emphatic terms.

The Republican party, being out of power, naturally suffers less than its great rival from the silver agitation; but if it takes a stand against free coinage, as it seems bound to do, it will certainly lose a large element of its voting strength. Already some of its strong men have declared that they will support a straight silver ticket against a Republican gold-standard ticket, and it is not to be doubted that there are multitudes of the same way of thinking. But in spite of this threat the party is steadily taking ground on the policy of bimetallism under international agreement and against free coinage as an independent policy. Within the week the Republicans of Kentucky have followed the example of the Republicans of Ohio in declaring for "every dollar as good as every other dollar," which, of course, means settled opposition to free coinage. That this is to be the attitude of the party in the fight of next year is about as certain as anything in the future can be. Indeed, it could not well take any other position since its strength is chiefly in the States where vested interests are largest.

There is but one possible circumstance which might prevent the impending upheaval in both the great parties on the currency issue, and that is a sudden return of general prosperity. If from now on the prices of staple products should advance, and if this movement should be accompanied by business improvement to such an extent that next summer the country should find itself busy and thriving, then the currency question would probably sink into desuetude and the tariff would again reign as the supreme political issue. But, while there are many signs of improvement, it is hardly likely that there will within a single year come such a change as will make the country forget the matters now uppermost in the public mind. It appears to many as impossible—and the *RURAL* will confess to a degree of sympathy with this notion—that anything like universal good times can come prior to the restoration of silver to a definite and just place in the monetary system of the commercial world.

Within the week Mr. Olney has been formally transferred from the Attorney-Generalship to the

Department of State and his former place has been filled by the appointment of Judge Judson Harmon, of Ohio. Harmon is said to be a lawyer of the first rank and a man of high character. He was a Republican during the war and up to the early seventies and belongs to the reform wing of the Ohio Democracy. He abandons a very lucrative business as a corporation lawyer to take public office. The general feeling about the promotion of Mr. Olney is rather more favorable than might have been expected. That from Evarts, Bayard and Blaine it is a big step down to Olney nobody denies; but it is claimed, on the other hand, that the new Secretary is very much of an "American" in his sentiments and that we shall have at his hands no such humiliating experiences as those which grew out of the Hawaiian and Nicaraguan incidents. It is profoundly to be hoped that Mr. Olney's official career will justify this claim.

## Another Treatment for Morning Glory.

TO THE EDITOR:—I noticed in the *PRESS* of June 1st an inquiry as to the best way to destroy morning glory. As I have been a reader of the *RURAL PRESS* for some time, and am much interested in the information it gives to its many readers, I thought I would try and help a little by giving my experience with morning glory.

I have been a farmer in Maine, Iowa and California for over thirty years. The best success I ever had in killing out morning glory or any other bad vines or weeds has been to let them mature after I have cultivated the ground, which is necessary for the benefit of the trees or vines that may be growing on the land. It is of no use to try to raise a crop for profit where morning glory covers the ground unless you plant corn as soon as you plow the ground. Then let the morning glory grow with the corn until it is matured or in the blossom; then get sheep enough to eat it down and keep it down during the hot, dry weather in August, and I will assure you it will kill it in two seasons. As you cannot let sheep run in a vineyard or young orchard, you must cut the morning glory and keep it down after it blossoms in the hot, dry weather in August. Don't cut them in moist weather; it is time and money thrown away. The plants will throw out half a dozen sprouts to every one you cut off. Be sure and cut them all when you start in. Clean the ground and leave everything exposed to the sun and dry wind. If you plant corn or anything else, plow as late as possible, so that the vines will be in the blossom about the 1st of August. Try an acre, more or less, and report results.

C. H. C.  
Santa Rosa.

## What Is the Matter?

TO THE EDITOR:—Thinking you may be interested in a paragraph received in a recent letter from New Orleans. I venture to copy it and send it to you:

There are some fine looking California cherries in the market. Last year I noticed something about the California fruit that I should think might prove a great drawback to its sale if not improved. I tasted peaches, apricots, grapes and plums that had a carbohic flavor not at all agreeable. I concluded it came from some system of fumigation of boxes or spraying of trees. The first time I noticed it was after buying some fine looking apricots. I gave some, before tasting myself, to several persons, and was a little surprised to see a young lady turn to a child and say: "You may have this." On tasting mine I understood why she gave it away. Do you notice any such flavor now in San Francisco?

I think it will not be necessary to give my name if you wish to refer to the matter in your paper.

San Francisco.

READER.

We cannot say whence this flavor came. Carbohic acid is not used in any connection with our fruit handling so far as we know. Perhaps some fruit shipper may account for the trouble.

## Killing June Bugs.

TO THE EDITOR:—Can you give me any instructions how to save my prune trees from the "June bugs?" Every year about the end of May until the beginning of July, swarms of June bugs come in the evening and night to eat the leaves from the prune trees. The trees cannot bear any fruit that way and finally will die. You will oblige me very much if you can help me to fight those hurtful insects.

Toluca, Los Angeles Co.

L. P. VISSER.

These beetles can be poisoned by spraying the trees with Paris green, one pound to 300 gallons of water, keeping the mixture constantly stirred while spraying, so that the poison shall not settle and make the last part of the wash strong enough to burn the foliage.

They can be caught in great numbers by using light-traps—a lantern sitting in a large shallow pan of water in which a film of kerosene oil is maintained.

One of the best ways to capture them on small trees is to spread sheets under the trees, give the tree a sharp knock or shake and pour the catch into hot water. They readily drop from the leaves upon the sheets.

## Gleanings.

THE season's output of cherries from Chico amounted to six carloads, for which "satisfactory prices" were obtained.

THE *Register* gives a long list of farmers in Napa county who are successfully working tracts of from two to thirty acres.

SANTA ROSA *Democrat*: Martin Peter, the Los Guilicos valley vineyardist, has set out 11,000 resistant vines the past spring and will set out twenty additional acres next winter.

COLUSA *Sun*: Dan Pollard, near Willows, after wintering ten cows on his five acres of alfalfa and running a dairy eighteen months, removed the cows this spring and has already cut three tons to the acre in hay, and the alfalfa is nearly ready for another cutting. C. M. Sehorn planted three acres last year and has kept a horse and two cows fat on it and cut off three tons of hay.

HANFORD *Journal*: The planting of the black-eyed stock pea, of the bunch variety, between vineyard rows, is highly recommended by those who have tried it. The peas are planted eight to ten to a hill. This bush pea is of a low growth and does not shade the vine. Hogs are very fond of this variety of feed. The peas can be planted any time before the middle of June. A man near Porterville, who tried it last year, and hogged off the peas and grapes, made a good profit off it—a great deal more, he says, than if he had harvested the raisin crop.

SANTA ROSA *Democrat*: J. E. Hall thinks local hop growers stand fair prospects of realizing better prices this year to compensate, in part at least, for last season's discouraging returns. He says it is too early to formulate opinions based on reliable data, or any data at all, so far as Europe is concerned. In this country, however, present indications point to a short crop in New York State, while on the Pacific coast a variety of causes are operating to diminish production. New pests have ravished some yards, and, in some localities, owners of yards are not trying to raise crops, preferring to save the costs of cultivation. All in all, there will probably be no over-production in this country; and if Europe has a short crop, prices will surely advance to remunerative figures.

MR. GEO. T. RICH of Florin writes: In thinning my fruit I have taken a new departure. I thin light at first, removing all small growth and thick clusters to a limited number, knowing that we might have strong winds, as in previous years. As the effects of the recent storm destroyed so much fruit, I went over my orchard and shook the trees lightly, the blighted fruit falling off, thus saving time in thinning by hand. I continued this process till after the critical time had passed, and now but little is required. Where the land is irrigated the quantity of fruit can be retained to a larger degree than land only cultivated, as the peach, plum and prune for shipping. Last year I thinned early, consequently the north wind blew off a large percentage of my fruit.

THE *Healdsburg Tribune*, urging the outsiders to come into the Wine Growers' Association, says: A year ago grapes sold, delivered at the wineries, for \$6 per ton, \$8 maximum, and this year, under the protection of the trust, the growers will receive a minimum price of \$12 per ton. Not alone will this combine bring about better figures for the producers now, but will be productive of the manufacture of better grades of wine, and thus create larger consumption and secure preference to the products of Eastern States and foreign countries. It is a matter of great moment to all who are connected with the industry, and its benefits and advantages should be given the serious consideration of those who are holding back. Procrastination will inevitably result in a great loss to them.

NEWCASTLE *News*: D. B. Lewis has the credit of bringing the first box of peaches to Newcastle this season. He brought it in early on the morning of June 3d. A little later in the day six more boxes were brought in by the Schnabel Bros., from their Columbian orchard. The Co-operative Fruit Co. got the fruit. They received their first box of blackberries on Saturday, June 1st. The first box of peaches they received was from Penryn, on Saturday, June 1st. The peaches were grown by H. M. Reith, of that place. Geo. D. Kellogg received his first blackberries on May 24th, and first cherry plums on May 31st. The Fruit Growers' Union received their first peaches on Monday, June 3d; grown by H. H. Griffith, at Bellevue orchard. The first apricots received by the Union were twenty-two boxes, grown by Andrew Walker and brought in on May 25th. The Union got the first box of ripe Clyman plums we have heard of this season, on Tuesday, June 4th; grown by Wm. Foster, on his Mt. Pleasant orchard.

AN unexpected market for California wheat appears to be opening up in Texas. We take the following from one of the city dailies of the 7th: "During the past few days there have been businesslike inquiries for wheat by the milling men in Missouri and Texas, who rarely look this way for their supply. As a rule the millmen in Texas and Missouri receive their supply from such grain centers as Illinois, Ohio, Indiana and Oklahoma Territory, for the reason that the freight rates from those places are so much lower than from other sections. Only once, many years ago, did Texas call upon the Pacific coast for this class of cereals. The wheat crops in the Middle States mentioned have been sadly damaged by the cold weather which was followed by an excessively hot spell. This injury to the crops caused the Southwestern millmen to look to other fields for their supply, and for some time past they have been drawing considerable out of Oregon and Washington. The reason is that they have got better freight rates from the railroads running from the extreme northwest Pacific coast to Missouri and Texas than could be secured from the Central and Southern Pacific. Several months ago a large wheat dealer received an inquiry for this commodity from Missouri, in which the writer incidentally mentioned that he hoped to do business on this coast before long, as he had been told that cheaper freight rates from this section would soon go into effect. A few days ago came a small order from the same party for about 100 tons, or about ten carloads, which will soon be on the way east. During the past few days three or four millmen from Texas have been in this city making inquiries for wheat, and it is said through local dealers they are making purchases that will soon be on their way east by rail. Wheat dealers, in speaking of the prospects of a new outlet for California wheat, say that the present dull times are about at an end. Their argument is on these lines: Chicago makes the wheat market for the world and the prices set in Chicago are generally accepted by the English dealers. England is California's principal market."



## Rainfall and Temperature.

The following data for the week ending 5 A. M., June 12, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA<br>ATIONS. | Total Rainfall for the<br>Week. | Total Seasonal Rain-<br>fall to Date. | Total Seasonal Rain-<br>fall Last Year to<br>Same Date. | Average Seasonal Rain-<br>fall to Date. | Maximum Temperature<br>for the Week. | Minimum Temperature<br>for the Week. |
|-----------------------|---------------------------------|---------------------------------------|---------------------------------------------------------|-----------------------------------------|--------------------------------------|--------------------------------------|
| Eureka .....          | 46.30                           | 52.22                                 | 43.61                                                   | 70                                      | 44                                   |                                      |
| Red Bluff .....       | 28.87                           | 19.70                                 | 25.26                                                   | 100                                     | 64                                   |                                      |
| Sacramento .....      | 24.11                           | 14.19                                 | 21.93                                                   | 92                                      | 50                                   |                                      |
| San Francisco .....   | 25.70                           | 18.30                                 | 24.24                                                   | 77                                      | 48                                   |                                      |
| Fresno .....          | 14.15                           | 6.27                                  | 10.96                                                   | 100                                     | 56                                   |                                      |
| Los Angeles .....     | 15.92                           | 6.53                                  | 20.33                                                   | 100                                     | 50                                   |                                      |
| San Diego .....       | 11.61                           | 4.09                                  | 10.86                                                   | 76                                      | 56                                   |                                      |
| Yuma .....            | 2.97                            | 2.16                                  | 3.56                                                    | 108                                     | 64                                   |                                      |

## Weather and Crops.

Report for the Week by the Director of the State Weather Service.

Director Barwick of the Weekly Weather and Crop Service summarizes as follows:

The average temperature for the week ending Monday, June 10th, was: For Eureka, 54°; Fresno, 78°; Independence, 70°; Los Angeles, 66°; Red Bluff, 78°; Sacramento, 77°; San Francisco, 60°; San Luis Obispo, 62°; and San Diego, 62°.

As compared with the normal temperature, there is a deficiency of heat of 1° at Eureka and Los Angeles and 2° at San Diego, while an excess of heat is reported at Fresno of 5°, Red Bluff 6°, Sacramento 9° and San Francisco 1°.

There was no rainfall to an appreciable amount at any point. There was a trace at Eureka and Los Angeles. The deficiency of rainfall was slight, as very little, if any, rain falls at this season of the year.

The reports from the various sections are very contradictory as to the effect of the north wind on crops. In some places, grain is reported to be badly damaged by shrinkage, especially the late-sown grain, which had passed the milky stage and was in the doughy state. This was somewhat shriveled, while that which was ripe and ready for the reaper was more or less shattered out and heads broken off by the high winds of the 7th and 8th. This north wind was much cooler than usual for the season of the year on account of so much overflowed country, across which this wind had to pass. The norther, being so dry, caused rapid evaporation, and, as evaporation from large bodies of water produces cold, it necessarily made the wind cooler than northerly winds usually are at this season of the year.

Had the past season been one of small precipitation and little overflow in the tule basins, then the present norther would have done thousands of dollars more damage than it has done at the present time, for no doubt the effects of the dry norther has been somewhat exaggerated both as to effects on grain and fruits.

Harvesting has begun at a few points, but it will be general in about ten days or two weeks.

Hops are not damaged to any great extent by the worms in Mendocino county.

Grasshoppers are reported in Butte, Yuba and portions of Placer counties.

## Sacramento Valley.

TEHAMA (Red Bluff)—Six days' continuous north winds have blighted almost all vegetation, and the high winds have whipped off considerable fruit, besides breaking down trees. Late-sown grain which was in the doughy state is being badly pinched and shriveled up, while the ripening grain is being threshed out by the high winds. The promising grain crop of a week ago has sustained quite a set-back.

BUTTE (Palermo)—The fruit is getting ripe. In some localities grasshoppers are eating the tender grape vines. The ground is very dry and irrigation has begun.

GLENN (Willows)—This county has not been affected with such a severe north wind in years as the present storm. Much of the grain is being shelled out, but all state that the wind is not doing as much damage as it usually does on account of its being so cool. Along the river and on the plains the wind has been very injurious to the fruit crop by blowing it off the trees.

COLUSA (Cortina)—Prospects for good crops have never been better. (Colusa)—The north wind has damaged very much late-sown grain by shrinkage and heating the heads of that which was ripe. Much damage has also been done to fruit by the high winds.

SACRAMENTO (Arno)—The continuous hot and dry northerly winds have somewhat injured the wheat and barley. (Orangevale)—Weather warm and wind north; early fruit ripening fast. (Elk Grove)—The north wind has blown considerable fruit from the trees, especially large fruit and small oranges. Grain is shrinking up.

YOLO (Winters)—The damage by the north wind is considerable to almonds, pears and peaches. (Woodland)—Grain which is nearly ripe will suffer greatly from the heads being broken off, and also from the wheat being threshed from the heads. Where the grain is not ripe enough to be injured in this way, the wind will to some extent shrink it and also bend and twist the stocks, so that the wheat will not fill out so well. The apricot, pear and almond will be appreciably damaged. In some fields in the hills, where the crop is ready for harvest,

nearly all the grain has been threshed out. (Capay)—The north wind is doing much damage to the grain by breaking off the heads.

SOLANO (Rio Vista)—The raising of a good crop of flax this season is beginning to open the eyes of our progressive citizens. The harvesting of barley on Brannon Island will begin next week. (Dixon)—The farmers generally are harvesting barley, and soon wheat will be ready. The crop will be a fair one. The north wind has done much damage in shelling out the barley.

## Sonoma Valley.

SONOMA (Sebastopol)—Crops are advancing well. Grapes will not be up to the usual average. (Occidental)—The apple crop will be heavy; grapes, average; peaches, light. (Santa Rosa)—Peaches are not nearly as plentiful as last year. Some Late Crawford trees bear in clusters and require thinning; others have scarcely any on them. The Muir is the only variety noticed this year with a full crop well distributed and requiring general thinning out.

## Santa Clara Valley.

SANTA CLARA (San Jose)—The apricot and peach crop outlook of Bear Creek Summit, near Los Gatos, are reported to be very promising. (Campbell)—Cherries are ripening fast; Tartarians are about all off and the late white ones will shortly be ready to ship. Apricots will open about July 1st.

## San Joaquin Valley.

SAN JOAQUIN (Lodi)—Warmer weather, with brisk, northerly winds has hastened the ripening of grain, but did little or no damage. The weather has been good for melons and corn, which are now making rapid growth; grapes are setting well and promise a good crop.

STANISLAUS (Turlock)—The continuous winds have blown down quite a lot of grain (wheat and barley), so that it will be almost impossible to harvest it. The wind is shattering the rye quite badly.

TEHAMA (Goshen)—Barley harvest has begun with good prospects. Some report there is no kernels in the head; the rust has destroyed some pieces at least, and much disappointment is the result. The fruit prospect is fair.

KERN (Bakersfield)—The weather has been seasonable and has in no way affected crops, except to make them grow.

## Southern California.

SANTA BARBARA (Los Alamos)—So far the mustard crop in this valley has not been troubled by worms. (Santa Maria)—The rust has damaged the wheat crop in the Nipomo district. Nearly all the small grain had to be cut for hay in order to save it. (Carpenteria)—Weather fine for beans. (Fremontville)—Weather not very favorable for the crops. High winds have dried out the ground and shriveled vegetation in some places. Grain has ripened very fast. First planting of beans about completed. (Santa Paula)—The high winds which blew on the coast about ten days ago covered up some 1500 acres of beans.

LOS ANGELES (Los Angeles)—Warm weather has hastened ripening of all crops. Reports are generally encouraging, though there have been drawbacks. In the bean country the plants were injured to some extent by the high winds and by army worms, and replanting was necessary.

SAN BERNARDINO (Near Pomona)—The apricot crop for this season will be less than two-thirds of the full yield. Peaches will be a very heavy crop and trees will have to be thoroughly trimmed to keep the limbs from breaking. Prunes will be the largest crop in several years; thousands of trees have the most abundant yield they ever bore. (Cucamonga)—The prune crop, which earlier in the season promised to be short, has lately developed in size. In most cases a big crop will be gathered.

SAN DIEGO (Otay)—Crops are growing rapidly. Hay a fair crop.

## Coast Counties.

MENDOCINO (Ukiah)—The warm weather seems to have thinned out the worms to some extent in this valley. There has not been a great deal of damage done to the hops, but some alfalfa fields have been badly eaten up.

SAN BENITO (Vallecitos)—Grain is looking exceedingly well. (Bear Valley)—The early-sown grain looks well, but the late-sown is backward. The whole yield, however, will be much more than last year.

MONTEREY (Salinas)—The bean and potato crops promise well, likewise yellow mustard. (Jolon)—Grain is ripening very fast and will make a good crop.

## Foothills and Mountain Counties.

PLACER (Newcastle)—The cherry crop is nearly gone. Peaches are ripening and are a good crop. (Loomis)—Alexander peaches are coming in freely.

It is reported from Wheatland that grasshoppers are not eating up everything green around Wheatland, nor are they a menace to the crops of Sutter and Yuba counties, as has been published recently. The correspondent, who has investigated the matter, is unable to report any one holding an opinion that the hoppers are increasing or will seriously menace the crops. It is true that more than the usual number of these insects have been hatched this season, and favored locations along grain fields in the shade of a tree or fence are literally alive with them. Small gardens near or on parched pasture land and along the grain fields naturally attract the insects. On the fertile bottom land of Bear river, which is supporting hops, orchards, vineyards, alfalfa, corn and other green crops, no hoppers are to be seen. Supervisor Atkinson, who has been over the county south and west, says he had noticed no alarming congregation of the insects. Other persons returned similar information, and in no instance did we find a person who had cause for alarm.

The great Venetian water carnival and floral fete has been in progress at Santa Cruz all this week and has attracted wide attention from all parts of the State. Probably more striking effects on land and water were never contrived than those enjoyed at Santa Cruz. The water features, aside from the grand old ocean, were secured by damming the San Lorenzo river and forming a large lagoon, on which gondolas and other most wonderful water craft were floated. The affair was most generously planned and provided for and is a great success.

The Sperry Flour Co. has recently been a heavy buyer of wheat on its own account. Its manager denies a report that they have been buying for shipment.

The farmers of Guadalupe agree to plant 14,000 acres to beets if anybody will establish a factory to extract the sugar from them.

## HORTICULTURE.

## Pruning Fruit Trees and Thinning Fruit.

By H. CULBERTSON at the meeting of the Southern California Pomological Society.

The subject of tree pruning is an old one. It would seem, however, that none are yet so old and experienced but new ideas may be brought out. The climate of the Pacific coast is one that gives every opportunity to see the results of tree training. Severe cold that so frequently destroys all that a person does in training in the Eastern States is a stranger here. Yet perhaps there is no place where greater attention is required of the orchardist. Not because trees will not fruit, but rather because they fruit too abundantly. Perhaps also, in part, that more people produce fruit; and to succeed quality of fruit is one of the prime factors. Without further preliminary I will proceed, confining my remarks to deciduous trees.

In taking the tree from the nursery cut it back to twelve or eighteen inches and cut off close to the body of the tree all side branches. As soon as the trees begin to grow they should be gone over once a week for five or six weeks and rub off the buds that are not wanted, leaving from three to five branches to grow, being careful not to allow more than one branch from one place.

After the leaves have fallen and before they start again do the pruning, preparing the tree for the second year's growth. Cut back all main branches about three-quarters of their length, leaving the tree in possession of one-quarter of its previous year's growth, being careful to cut off all small branches on these small limbs; not a half or two-thirds but the whole length. It is well as the trees are commencing to grow the second year to go over them once a week and rub off the extra shoots, especially where two or more come out at the same place. Two new branches on each of the three to five left from the first year's growth will be sufficient.

The pruning preparatory to the third year's growth will consist in cutting back three-quarters of the previous year's growth, and thinning out where more than two branches have grown on the main branch. Sometimes, however, one will be sufficient to leave. If the fruit be peaches a few of the small side branches may be left after cutting off about one-half their length, the object being to have some fruit the first year.

The pruning for the following years will depend very much on circumstances, but in general the leading branches should be cut back from one-half to three-fourths, especially so with peaches. Not only cut back the leaders but cut about one-half all small shoots. The object being to save largely in the process of thinning the fruit. It will be found that in some varieties the fruit buds are nearly all on the outer one-half, in which case it will not do to take off so much. In addition many of the little branches that bore fruit the previous year will be found dead and should be removed.

The amount of thinning out of larger branches and cutting back two or three years of growth in some cases will depend on the general thrift of the tree, being governed always by whatever will keep the tree in a strong vigorous condition. Do not permit a tree to have any new growth. Such treatment with the peach would prove fatal and make an orchard short-lived, while by proper care peach trees have been known to be in good bearing at thirty years of age. The peach, it must be remembered, only bears on wood of the previous year's growth.

Other fruits vary somewhat in their method of bearing. The apricot bears most of its fruit on short spurs on the larger branches, these spurs make very short growths and continue in bearing several years. The apple, pear, plum, etc., bear or should bear largely on short spurs. There is, however, a tendency of many fruits in this climate to bear at the terminal bud of the previous year's growth. The Bartlett pear is one of the noted examples. If proper pruning is done no harm will result. The tendency in such cases is to bear a few specimens of fruit and the tree be all broken down and deformed by the weight of the fruit, were twice the quantity of fruit might be borne on the little spurs on the larger branches, and no breaking down result—the Winter Nelis pear being an example of the class where nearly all the fruit is borne on the spurs. Trees that grow rapidly do not produce bearing spurs at an early age, and are generally tardy coming into bearing. The growth of spurs should be encouraged in all fruits that produce their fruit in that way.

There is another still more important point in connection with the production of these spurs, and that is that in time they become abundant. The tree overbears and no new growth results. The fruit is small and the tree becomes short lived. Whenever the spurs become so numerous and so much fruit is produced that little or no new growth results, at least one-half of the spurs should be cut out as well as a number of branches bearing these



spurs. The fruit grower's criterion should be bright, healthy, vigorous trees, and large attractive fruit.

One point in regard to the pruning of the peach ought to be stated. It will be observed that branches coming out on the side toward the interior of the tree usually begin to fall after the second year; they seem unhealthy and should be taken out. A little observation by the orchardist will suffice to note the result. I should have said that where a strong branch starts on the inside the old branch above the new one soon fails. Branches on the right and left of a main branch stand a good show of maintaining an equal existence.

**Thinning Fruit.**—I have also been requested to say something on the subject of thinning fruit. This is almost of equal importance to pruning. It is almost impossible to so prune a tree that no thinning is required, and at the same time get the amount of fruit that the tree is capable of bearing. So then it becomes a matter of dollars and cents, and I might say right here that in general if fruit is thinned it is not a matter of cents but dollars. There are two general statements worth considering that might be made before proceeding. 1—All stone fruits require more of the tree's energy to produce the seed than the edible part of the fruit. 2—A fruit three inches in diameter is eight times as large as one an inch and a half in diameter. In other words fruit is eight times the size of one-half the diameter.

In my experience there is no single operation in connection with fruit growing of more importance than thinning. The past season, in order to test the difference in expense of preparing large and small peaches for drying I timed the cutting, and found it took double the time, hence double the expense, which meant a difference of about \$15.00 per ton of dried fruit. Add to this a difference of 2c per pound in price makes \$55.00 per ton. Suppose an orchard under good treatment produces a ton of peaches to the acre, then \$55.00 would represent the difference in profits. Unthinned or small fruit is certainly undesirable.

As to how much thinning should be done there are diverse opinions. Some take off one-half, others three-fourths. Some growers thin to meet a certain ideal, but find it difficult to explain in words. The common rule of leaving a specimen of fruit every four or six inches is a safe rule; that means many must come off. Different conditions of soils, climates and irrigation vary the amount to thin out more or less. More may be left where the tree is on land giving a strong vigorous growth.

In thinning peaches I have been practicing a method that gives good results and is easily learned. The peach bears on three sizes of branches that are one-eighth, three-sixteenths, and one-fourth of an inch in diameter. The first has two peaches, the second three, and the third four. This, of course, after there has been a judicious course of pruning and the trees under irrigation; trees on dry land should have only one-half as many left. To reach this result often a dozen may have to come off, allowing only two to remain. The more there are the greater necessity for thinning.

The time for thinning peaches is in the latter part of May, or as soon as one can be sure which are likely to remain on the tree and which will drop of their own accord. The same rule will hold with other fruits, though some of them may be a little latter in time.

### The Newer Oranges and Lemons.

At the recent meeting of the Southern California Pomological Society, Mr. B. F. Dixon, of Escondido, read an essay on citrus-fruit growing, from which we take his reference to the newer varieties. He held that among these new varieties the Thompson's Improved Navel and the Joppa are certainly destined to be largely planted when known, and our nurserymen have sufficient stock propagated to supply the demand.

The Thompson's Improved Navel is of medium size, nearly all specimens are oblong, very small navel, skin very thin, tough, and glossy like the St. Michael, very rich in color, flavor excellent, a good keeper, and so far they ripen later than the Washington Navel.

The Joppa, as raised by us, is one of the finest oranges in San Diego county. It is medium in size, shaped very much like the Mediterranean Sweet, skin extra thin and tough, very smooth, looks like it was varnished while on the tree, almost seedless, pulp can be eaten without detriment to the most sensitive stomach, flavor A No. 1, good eating through April but properly ripe in May, and keeps well into June. The tree has few if any thorns, while the fruit is the heaviest orange grown. We received \$1.75 per box f. o. b. Escondido last year for our entire crop of this variety. This year they will grade fancy, and have been shipped but the returns are not yet in.

At the late lemon fair in San Diego we took first prize for the best packed box of oranges, the variety being the Joppa. We shall plant extensively of this orange as soon as the trees can be propagated.

The attention of planters is called to the importance of securing citrus trees budded on the Florida

sour orange stock. We have tried both sweet and sour stock in our nursery and orchard at Orange Glen, and hereafter will only propagate and plant trees that are budded to the sour stock. It is hardier and has more tap root, and the gopher seldom touches it because of its bitter taste. It is not subject to foot rot nor gum disease.

As others have been assigned essays on the lemon, we will not enter into that subject; however, we will say we have the Eureka, Lisbon, Seily, Bonnie Brae and Villa Franca in our orchard. The latter we find much superior to other varieties.

The grape fruit, or more correctly speaking, the pomelo, is a fine fruit and is becoming very popular in the Eastern cities. The present season they are selling for from \$6 to \$9 per box, and the supply has been a limited one owing to the recent freeze in Florida. Those who are fortunate enough to set out an orchard of grape fruit in the near future will, from present indications, make more money than either the orange or lemon grower. The tree is very beautiful in foliage and attracts much attention when fruiting. It often bears its fruit in clusters, and the flavor is like the grape, hence the name grape fruit. The fruit has great tonic properties, and is largely used by persons in delicate health as an appetizer. It is relished best by most persons when eaten with sugar.

It behooves every orange grower to keep his eyes open, to read and observe not only his neighbor's methods and experiences, but also to note the results of his own work, and alter his course if it seems likely to wreck his individual bark.

The reference to grape fruit and the so-called improved Washington Navel elicited a lively discussion participated in by Messrs. Holmes, Williams, Culbertson, Dixon, and others.

### The Demand for Pickled Olives.

The Oroville Register gives a selling experience of Messrs. Fogg & McLaughlin, who have one of the largest and most luxuriant olive groves in California, about half a mile north of Oroville in Thermalito colony. For two or three years past they have expended much time and money in putting up as fine a quality of olive oil as could be made, and in placing on the market the best pickled olives in California. That they have succeeded is evident from the following extracts taken from two letters lately received by Mr. Fogg. The first is from Geo. Warren, the assistant manager of the Palace Hotel. He writes, "If you have not already disposed of the olives you had on hand when I ordered the last, will you kindly ship to the hotel by freight as before, 100 gallons? If you have not that quantity please send me what you have."

The second letter is from Major Frank McLaughlin, who is in San Francisco. He says: "I reached here this afternoon, May 28th, at one o'clock, and between that hour and three I think I must have had ten inquiries for our olives, that is, the quantity on hand, price per gallon, etc. There is no mistake about it, I did not exaggerate in the slightest when I said we could dispose of 10,000 gallons if we had them. George Warren tackled me first with regrets that he had not take our entire crop, and right in his wake came Pollack, the buyer for the hotel, redhot to get 1000 gallons, and his jaw fell about a foot when I told him we did not have a gallon for sale. He told me without doubt that ours were the very best olives that had ever been served in San Francisco and that this was the unanimous opinion of all the guests at the hotel who had the good fortune to try them. He further stated that when they ran out he called on Goldberg, Bowen & Co., but they refused to sell him any large quantity and in small lots wanted \$1.30 a gallon, which is their price virtually to the trade."

### Protection from Frost.

The way M. A. Thayer, the Wisconsin berry grower, saved his strawberries during the May freezing may be of use to some of our frost fighters. He says:

May 14th, 8° below freezing. Frost five successive mornings.

Strawberry fields white with blossoms. Currants and gooseberries half grown. Raspberries and blackberries bending with buds of fruitful promise. More than 100 acres of berries to protect. How was it done?

At 11 o'clock A. M. the faithful signal service reports "killing frosts to-night." At 1 o'clock P. M. a score of men with teams were covering berries with mulch from between the rows, and wild hay from stacks near by.

The early dawn found them still at work. Result: 90 per cent of fields so protected, saved; balance ruined or greatly damaged.

Moral: In localities subject to frost have hay or straw ready for use. One good load to each half acre. Wild hay is best, being light and more compact. One man may protect an acre in a few hours.

Remove covering early next morning to allow continued pollenization.

A thick smudge may protect berries at 1° or 2° below freezing.

## THE FIELD.

### The Farmers' Customers Multiplying.

Statistics are appealed to to show that the era of low prices was due to too rapid multiplication of farms and too little increase of consuming population. The claim now is that the other course of increase prevails, and a greater proportion of buyers will make better prices without regard to tariff and currency and the host of minor affairs which have been credited with the farmers' woes.

Mr. Morton R. Davis holds this view in a recent contribution to the *Country Gentleman*, and we propose to quote enough to show the basis upon which the claim of a good time coming is made. Mr. Davis begins with the postulate that if new farms are being opened at a less rate than increases in the urban (or village and town) population, then the competitors of the farmer are growing relatively less. Should it appear that the ratio of cultivated acres to population is rapidly diminishing, and is now less than in recent periods, the conclusion is unavoidable that the era of prices below a remunerative level, resulting from the competition of farmer with farmer, is fast nearing its end.

Referring to the census we find that in 1850 and 1860 595,000 new farms were added, providing homes and work for 2,900,000. In this decade farmers increased 41 per cent, while their customers increased 59 per cent.

During the ten years ending with 1869, some 616,000 farms were added to the productive areas, and these added homes provided employment for 3,500,000 out of the 7,200,000 units added to the population. During this period farmers increased but 30 per cent, while their customers increased 70, or two and a third times as fast. This was the era of high prices attributed to so many causes, but which were primarily due to the varying rates at which increased farmers and their customers.

In the next decade conditions were reversed with an unpleasant rapidity, as we find 1,349,000 new farms added, which furnished homes and work for no less than 7,600,000 out of a population increase of 11,600,000. Between 1870 and 1880, farmers increased nearly 51 per cent, and their customers so little, comparatively, that less than one urban family was dependent upon each added farm for supplies. This was the manufacturer's and distributor's harvest, as nearly two-thirds—including farm laborers and their families—of all the added population found homes and work upon the farm and made an insatiable demand for the products of mine, mill and factory.

The ninth decade, but just how early or in what year we are unable to determine, brought a reversal of the population current, and owing to the very complete occupation of the cultivable portion of the public domain, fewer and fewer farms were added to the competing areas. So pronounced was the change that but 556,000 new farms were opened in the ten years, as against the 1,349,000 of the preceding decade, and of the 12,400,000 added to the population, no more than 3,200,000, or only 26 per cent, were able to find homes and employment upon the land, while 74 per cent were crowded into village, town and city, there to compete with older residents for employment growing relatively less. During the decade, farms and the competitor of the farmer increased but 14 per cent, as against an increase of 51 per cent in the preceding ten years. For the first time in forty years at least did the rate of farm increase fall below that at which population augmented.

The astounding change in the movement of population which occurred in the ninth decade is of tremendous import, especially for the farmer, as it presages advancing prices for all the products of the soil and lower prices for all the farmer needs to buy.

While there are no data showing the number of farms added since the taking of the last census, the reports of the Department of Agriculture indicate additions of much fewer than 100,000 in the five years. If such is the measure of the increase, it is obvious that the customers of the farmer are increasing more than ten times as fast as his competitors, as more than 1,200,000 have been added to the nation's household since the farms were enumerated. Moreover, while the rate at which farms are being opened is a rapidly diminishing one, that at which the farmer's customers augment is a rapidly increasing one, as yearly greater and greater proportions of the added people are forced into the towns because of the absence of lands available for settlement as heretofore. So great is the change that already at least 19 out of every 20 added families must seek homes and work in the urban districts and swell the number of the farmer's customers instead of his competitors, as in periods not very remote.

The whole number of farms, the numbers added in each of the last four decades, with an estimate of those added since the taking of the census of 1890, the percentage of additions in each case, and the



ratios of farms and cultivated acres to each hundred people have been as follows:

| Year. | No. farms. | Farms added. | Per cent increase. | Farms to 100 people. | Acres to 100 people. |
|-------|------------|--------------|--------------------|----------------------|----------------------|
| 1850. | 1,449,000  |              |                    | 6.2                  | 243 est.             |
| 1860. | 2,044,000  | 595,000      | 41.1               | 6.5                  | 270 "                |
| 1870. | 2,660,000  | 616,000      | 30.2               | 6.9                  | 259 "                |
| 1880. | 4,009,000  | 1,349,000    | 50.7               | 8.0                  | 332 "                |
| 1890. | 4,505,000  | 556,000      | 13.9               | 7.3                  | 346 "                |
| 1894. | 4,665,000  | 100,000      | 4.4                | 6.8                  | 322 "                |

It appears that between 1870 and 1880 there were added nearly as many farms as were opened during 257 years prior to 1850; that the ten-year rate of farm increase rose from 30% in the war decade to nearly 51% in the next ten years, to fall as low as the proportion of 4.4% during the years that have passed since the taking of the last census. The table also shows what have been the changes in the ratio of cultivated land to people, the ratios for the first two periods being estimates based, of necessity, upon the census returns of product in the census years, which have, for this purpose, been assumed to be years of average yields.

The rapidity with which the creation of new farms and competitors of existing farmers have diminished is a most inspiring one, and from this time on we may expect the rate to decrease even more rapidly, because of the absence of readily available tillage acres.

If any reliance can be placed upon these showings, we are rapidly retracing the course which brought low prices, and the return journey will be all the more pleasant, as it is likely to be accompanied by a constant enhancement of prices for soil products as well as for the soil itself.

#### Clearing With the Plow.

An Eastern farmer, who has had much experience in clearing land, gives these suggestions: I do none of this work until I put the plow in the ground. A strong plow and a steady team are essential. I fasten an upright cutter to the plow, and with it can cut all but the largest roots. It also adds greatly where there are patches of hazel brush. The cutter is held to the share by a bolt passing through both, having a smooth head sunk into the cutter, a thread and bolt being on the other end. It is better to have the cutter back from the point of the plow than at it for two reasons: The point running under the root bends it, and the tension helps the cutter in getting through, and you are not so apt to run against a big root unawares, as the point running under it increases the draft and warns the team and driver. The blade of the cutter should be of tough steel, three inches wide and one-half inch thick at the back. When it becomes dull remove it and grind. It is held to the beam by a clevis passing over it and around the beam. I carry an ax with me, making a rest for it on the beam. With it I cut roots too strong for my team and the cutter. By pulling the plow back the root is left exposed. I do not grub any until I begin plowing, because I can plow close up to small stump and by cutting from that side can so loosen it that the plow will take it out. This saves moving the dirt with a mattock. The most troublesome stumps are those sending out many side roots. Those having heart roots can be closely reached with the plow, and if the heart root is cut a little below the level of the furrow the stump is easily pulled out and bothers no more. When I have plowed the land none but the larger stumps are left and there are no roots projecting beyond the stumps. A team used in breaking such ground soon becomes accustomed to the work and will go cautiously as they approach a stump.

#### Beans on Tule Lands.

A Stockton merchant tells the *Mail* that in beans there is nothing doing in that locality, the main demand being for seed purposes. The acreage in beans this year will be considerably smaller than last, but those who are going to plant beans are more hopeful of realizing better prices, as the experience they had last year will enable them to harvest their beans more expeditiously and thereby receive a greater profit in return. The principal beans planted in this neighborhood are the Black Eye and Lady Washington. It seems that the Lady Washington should be preferred, as that has a market all over the United States, while the former bean only has an outlet in the southern part of the United States and that market is limited and is very irregular.

#### Street Trees.

Prof. G. Husmann, of Napa, continues his notes on street trees in the *Register* with the umbrella tree, already frequently seen on the Napa streets, and if branched properly at a height of at least six feet, makes a very handsome round-topped tree, with fern-like foliage, which is easily kept in shape. Its root system is not of the strongest, however, and it is apt to be blown over in exposed sections. Otherwise, it is perfectly hardy here, and a good street tree, if care is taken in pruning not to crowd the top with too many small branches, which are

apt to die out in time. It also has fragrant flowers.

The tulip tree (*Liriodendron*) is a truly noble tree, and is one of the chief varieties planted on the streets of Washington. It belongs to the magnolia family and is, like all its congeners, somewhat difficult to transplant when large, as its roots are soft and tender, but it repays any extra care by its beautiful, stately growth, its large, bluish, deeply lobed leaves, smooth, shiny bark, and its beautiful flowers, resembling tulips—hence its name. In Ohio and Indiana it forms a large part of the forest growth, and is known there under the erroneous name of Yellow Poplar, although it has no affinity to the poplars, except in its light and elastic wood, which is one of the chief materials for the manufacture of boxes. It is a model street tree in every respect, and should not be lost sight of in our plantations. As we have water at our command the first year after planting, it can be made a success here.

## THE DAIRY.

### Silo Building.

Very little is yet done with silos in this State, and probably, under certain conditions, they have little field here, but in case some reader may like to put down some corn or alfalfa this summer we give the following suggestions by Prof. H. J. Waters, of the Tennessee Agricultural College:

A silo may be constructed of stone, brick, metal or wood. It may be erected entirely underground, above ground, or a combination of the two. Of whatever material it is constructed, it should be:

1. As nearly air-tight as possible.
2. Of such shape as to expose the smallest possible amount of wall surface in proportion to its capacity. That it shall have as few corners as possible. Nearly all loss from rotting occurs along the walls and in the corners, hence it is important that these points be carefully guarded. A square pit is much better than a rectangular one. Example: Silo, 16x48x22 feet deep—2816 square feet of wall surface. A silo 32x32x22 feet deep has the same amount of wall surface and will hold one-third more silage. A still better form is cylindrical, as the wall surface is reduced and the corners dispensed with. Example: A round silo 37½ feet in diameter and 32 feet deep has the same wall surface as the two silos above described, and will contain more than two-thirds as much silage as the rectangular one.
3. A smooth wall, so that the silage may settle easily and uniformly, without leaving air-pockets under the projections as in the case of a rough wall.
4. Its greatest dimension should be its depth, which ought to be thirty feet.
5. The floor or bottom of the silo should be made of concrete.
6. The walls should be thick enough to prevent the silage from freezing.
7. Some means of ventilation should be provided at the top of the silo and between the walls in order to dry them as soon as possible after the silage has been removed.
8. The life of a silo may be prolonged by painting both layers of the boards with which the silo is lined, on one side only, with hot coal tar boiled until it is not sticky when cold. The tarred sides should be placed face to face in the silo with tarred paper between them.

A cubic foot of silage weighs thirty to eighty-five pounds. It is safe to figure on a cow eating a cubic foot of silage per day. The number of cows and the number of days they are to be fed being known, it is an easy matter to calculate the size of the silo needed.

At least two inches of silage should be fed per day in order to keep it from spoiling on the surface.

The frame of a square or rectangular silo should be of 2x10-inch plank for studding, placed not more than sixteen inches apart, resting on two pieces of 2x8 inch, spiked together for sills. Great danger of spreading at the corners is to be looked for, and anchor bolts every three or four feet should be used.

In a round silo, 2x4 material is large enough for the framework, as it is understood that the lining boards act as so many hoops and prevent the walls from spreading, while the frame is only needed to support the roof.

Excavation should be made to solid earth, and the foundation wall built sixteen to eighteen inches wide, eighteen inches above the ground, with inner surface sloping to the bottom of the silo.

The lining need not be of matched boards, although they should be of uniform width and thickness.

### That Butter Filled Cheese.

What they think at the North of our butter-filled cheese, which the Attorney-General says is not an "imitation cheese," can be clearly seen by this forcible paragraph from the *Rural Northwest*, published in Portland. We quote for the benefit of butter-filling dairymen:

Owing to the low price of butter, a number of the

most enterprising Oregon dairymen have recently engaged in the manufacture of full-cream cheese, but are surprised to find that it is very difficult to find a home market for it except at ruinously low prices. Large quantities of alleged full-cream cheese are being brought from abroad, especially from California, and sold as low as 5½ to 6½ cents per pound at wholesale. It is not possible to believe that the cheese brought from California and sold at these figures is genuine full-cream cheese. They have an abominable practice in California of skimming the milk at the cheese factories in order to make creamery butter and replacing the fat thus taken from the milk with cheap butter which is so bad that it cannot be sold to consumers as butter. This is the worst kind of filled cheese, and yet it is impossible to determine its fraudulent character by examination or analysis.

### The Term "Package" in the New Dairy Law.

We recently alluded to the decision of the Attorney-General that skim cheese may be "filled," providing butter is used as filling. Another question was also decided by Attorney-General Fitzgerald. The meaning of the dairy act in reference to making of packages was much in doubt. Manufacturers did not know whether each roll of butter or cheese was to be marked or whether the package in which they were shipped was to be stamped. If the law insisted upon the former and not upon the latter it meant a material difference in cost.

The Attorney-General decided that it was not necessary to mark anything except the package in which the butter or cheese is packed. Each individual roll may be left unstamped, so far as the new law is concerned. The package, however, must contain a slip giving complete information.

## THE POULTRY YARD.

### Moping Hens and Squalling Chicks.

The long, warm days are coming, and the pesky vermin will soon follow. It is an old saying, "Don't borrow or look for trouble, it will come soon enough." But you must not apply that rule to the poultry pests, for if you do you will get behind. You must get the drop on them at their first approach. The way to do it is to keep everything clean, and to disinfect everything about their house and nests with carbolic acid (one ounce in two gallons of water) once a month. Then there are the head lice and yellow runners that get on the little chicks. A little acid and lard put on the heads and under the wings of the chicks will route those vermin. Don't use too much grease, as it is then as bad on the chicks as the lice. A great many people don't know and won't believe they have a great many vermin on their places until the latter get so plentiful they are crawling on every stick and board you pick up. Then you have a big fight on hand.

One of the surest signs of these pests, and one that is taken as a sign of cholera or some similar complaint, is to see the hens standing and moping around half asleep and picking themselves. The chicks squall around with their wings drooping. True, some may seem sick, and will be if something is not done for them. But clean up; don't have the house too warm; give plenty of fresh water and sand. That is the way I find my birds thrive.

As to food, I prefer some wheat and oats in warm weather, yet I use corn at night. I still claim that coarse cornmeal is the best main food for chicks. Of course a little oatmeal or cheese made of milk will do for a change, even table scraps; yet again I say, use the meal.—H. C. Hunt in *Farmers' Review*.

### How to Develop the Pullets.

Those who are raising pullets for layers, says a writer for the *Poultry Monthly*, should carefully distinguish between the food that is necessary for fitting cockerels for market and that which will develop the laying pullets. A great percentage of layers are injured in ability to produce eggs by the improper course of feeding which many poultrymen employ. When food is given in excess to a growing animal, not only is the food wasted, but the digestive organs are weakened. When an almost exclusive diet of corn is fed the growing chicks, they must eat excessive quantities of it to get enough of the muscle-forming material. Growing young do not readily fatten, but as the pullets become somewhat matured there is a tendency to take on internal fat, which can be only a hindrance to egg production. Corn should be fed sparingly in the poultry yard, in summer especially. The growing pullet should be fed solely with the view to developing the frame and egg-producing organs; and for this purpose the same food that is best for laying hens is the best for her. The chicks and laying stock can thus be fed with the same ration, which will prove a matter of economy in labor. When the cockerels become



troublesome to the pullets they can be separated and fed separately, upon the same food or upon a diet composed more largely of cornmeal, if it is desired to fatten them. There is nothing better for growth and perfect development than milk, oatmeal, chopped clover and bran. You will find every element required is contained in these, and in such proportion that the digestive organs will not be overtaxed by needless effort to secure enough of what is needed. It is preferable to feed the milk in the form of sour curd, taking care, of course, that it is not kept too long after becoming sour; in this form it is highly relished by fowls and assimilated with no risk of bowel trouble. It is best to have your oats ground, as they can then be digested with less tax upon the bird. The clover had best be cut fine (you can run it several times through an ordinary hay cutter) and then mix with an equal bulk of oatmeal and bran; this should be thoroughly moistened with boiling water and allowed to stand for twelve hours, and it will then be so softened as to be readily digested. The clover may be cut and used in its green state, or cut when in blossom, and cured for use in winter; this is one of the best foods for growth, but on account of its bulky character must be fed in connection with more concentrated foods. In addition to those foods, an occasional ration of cooked vegetables of various kinds will be beneficial; if confined in yards, a little meat or meat scraps from the butcher shop, boiled and mixed with their soft food, should be given to them about three times each week.

#### An Egg Preserving Fluid.

Prof. F. L. Washburn of the Oregon Experiment Station gives, through the columns of the *Rural Northwest*, a recipe which he has found most excellent. This recipe is well known to many—in fact, has been published—yet there may be many who would be glad to know it. Prof. Washburn states that he has kept eggs for one year and found them excellent for cooking at the expiration of that time. Another lot was kept for two years, and then about two-thirds of them, or nearly that proportion, was found acceptable for use in the kitchen. In this second lot the good eggs were at the bottom of the jar, where, naturally, the liquid was stronger, while the yolks of the eggs above had shriveled and hardened, rendering them unfit for use. The recipe is as follows:

Dissolve one pint of salt in one gallon of water; slack two pounds of quicklime in three gallons of water; when entirely slacked, stir and allow it to settle two or three times and then pour the clear liquid off into a crock or any receptacle that can be covered, and add the salt water, making in all four gallons of liquid.

Eggs placed in this must be perfectly fresh, clean and not cracked. They must be lowered into the liquid and not allowed to drop to the bottom of the crock, thereby running the risk of being broken. No treatment of eggs before putting in brine is necessary.

#### A Good Local Society.

What the poultry men of the San Jose region are doing may be suggestive to our poultry readers in other counties. At the last meeting of the Santa Clara County Poultry Association there was about twenty members present, and a very interesting session was had.

R. O. Shively, president of the association, called up the question of holding a county show in October. A general discussion was had of the matter, and the committee having it in charge was granted further time.

Mrs. Snow presented two light brahmas, which O. J. Albee scored, showing the members the good points of the fowls and wherein they were deficient. This feature has become very popular at the association's meetings and will probably be a permanent part of the programme. Mrs. Wilson, R. O. Shively, H. A. Brainard and L. F. Saunderson were appointed to bring buff leghorns to the next meeting to be scored by Charles R. Harker.

A discussion was had as the best method of increasing the society's membership, and it was the sense of the meeting that each member should invite his friends to attend.

### SHEEP AND WOOL.

#### The Coming Sheep.

One of the most important subjects of the flock owner, since laws and commerce have so shaken the foundation upon which he has builded hitherto, is what is to be the coming sheep, or the sheep which will pay best in the future. Of course, it is not necessary to hold that the Merino interest is definitively dead. As matters may change, it may be very lively indeed again, and for this reason strictly good

Merino blood should not be adulterated; but there is a crossing which may be profitable upon the common Merino foundation which underlies all our Western flocks. What shall that cross be? That is the question. Each breeder of mutton breeds answers it according to its point of view.

*What Southdowns Claim.*—At the meeting of the Southdown Association in Springfield, Ill., May 29th, the secretary made a report, from which we take the following:

Reports from breeders are of an encouraging nature and lead to the belief that during the coming season the demand for Southdowns will be greater than ever before. The changing of wool-growing flocks to those that will produce mutton first and wool secondly presents a grand opportunity for Southdown breeders. There is no question as to the superiority of their mutton. Their claims for a fineness of wool next to the Merino, their prolificacy, their early maturity and their healthfulness are well founded, and for hardiness the Merinos, heretofore claiming the first place, must give way to the Southdown. Wherever they have been tried, either on the Merino, native or other sheep, their good qualities make them favorites. In regard to them, Mr. R. E. Fitzgerald, Shiner, Texas, says: "I use all my pure-bred lambs on my Merino flocks and the cross is perfectly splendid. In 1890 I saw that we could no longer profitably raise sheep for wool only, so I concluded to try pure-bred Shropshires and Southdowns. I have nothing to say against the Shropshires, and if I had not tried them alongside with the Southdown I am sure that I would have been satisfied with them and thought they were good enough. The Southdown is the hardiest sheep in the world. It was thought that no sheep could withstand our hot, dry climate like the Merino, but the Southdown will stay fat where the Merino will die of poverty. I saw that fully tested the past winter." Mr. C. H. Nimson, in addressing the Sheep Breeders' and Wool Growers' Association of Mitchell Co., N. C., speaking of the sheep owned by the Bellevue Farm Co., said: "At Bellevue we selected the Southdown because we believed that these sheep were better adapted to the climate, soil and surroundings that we could afford them than any other. We commenced five years ago with poor, unselected, native ewes of all ages, sizes, and shapes, good, bad and indifferent, crossing them with pure-bred registered Southdown rams. The first cross made a wonderful change in the general appearance of the lambs, and in course of time they developed the characteristics of the Southdowns in other respects to an extent we had not been looking for. The second and third crosses have developed a mutton sheep that handles with ease and fattens readily. Our flock of grade and pure-bred Southdown lambs will turn out a large proportion of good profitable feeders weighing from seventy to one hundred pounds by December 1st. We have at Bellevue now more demand for Southdown ewes than we could begin to supply, even if we had our breeding flock up to the fullest capacity we could carry on the farm." The experience of these two flock-masters is that of others who have introduced the Southdown for the betterment of their sheep. This cross has been so successful that, as Mr. Nimson says, "after five years' experience with a flock numbering from 500 to 700 graded up from the native sheep we could not be induced to even experiment with other breeds."

*Cotswold-Shropshire-Merino.*—There is a Scotch settlement in western New York which is profitably using a complicated cross, of which a report is given in the *Breeders' Gazette* as follows:

We use a judicious cross of the Cotswold, large Merino and Shropshire, which produces a sheep with a heavy coat of medium wool, a round carcass of fine mutton and a robust constitution. A sheep that is hardy and quiet and easily fattened at any age should be about one-half Merino to keep healthy in large bands. I had a car of sheared lambs on the Chicago market May 23d averaging ninety-seven pounds that sold for \$5.75 per 100 pounds (the top of the market for shearlings). They were not as heavy as usual, the tops being marketed in January. Our common practice is to keep them on shock corn fed on blue-grass pasture at the rate of one acre per month to the 100 head till the 1st of April, when we increase the ration with a mixture of oats and shelled corn, half and half, at the rate of one and one-half bushels to the 100 head fed in troughs for supper until we market them. It would be well to shear in March, provided they can be sheltered for a few days in case of a storm. They fatten much faster after shearing.

Does it pay? is the leading question. That depends how sheep are handled. We will make some estimates. First we find the returns of a lamb. We have:

|                                                    |        |
|----------------------------------------------------|--------|
| He returns 9 pounds of wool at 13 cts.....         | \$1 17 |
| His carcass, 97 pounds, at 5 cts.....              | 4 85   |
| Ewe's fleece, 9 pounds, at 13 cts.....             | 1 17   |
| Total returns .....                                | \$7 19 |
| Now we find the cost of a lamb:                    |        |
| Interest on value of ewe to produce said lamb..... | \$ 25  |
| Pasture for ewe.....                               | 1 00   |
| Feed for winter.....                               | 1 25   |
| Pasture for lamb.....                              | 50     |
| Winter feed for lamb .....                         | 1 50   |

|                           |        |
|---------------------------|--------|
| Mr. Lamb now owes us..... | \$4 50 |
| Balance in his favor..... | \$2 69 |

In the above estimate I have not given Mr. Lamb what he might claim, as a good flock will shear ten pounds of wool, and a good shepherd will raise enough twins to keep up his flock and have some old ewes to sell for pocket money.

*Mutton Sheep Need Care and Feed.*—It is pretty clear that one who enters upon the production of early lambs or choice young sheep for mutton must prepare to shelter better and feed more liberally than he has done his wool flocks of Merinos. This is possible by using alfalfa and the cheap grain of this State, and it seems likely that such higher culture of sheep will prove profitable unless the local product of choice mutton should become too large. Concerning the Merino as a basis for higher sheep culture, the Cornell University Bulletin of April last holds that, in the trials made in raising early lambs from Merino or grade Merino ewes, it has been found that these sheep respond quickly in milk production to extra care and food, and that they are well adapted for the purpose of early lamb raising.

Formerly, Merino sheep were kept with great profit for the production of wool alone; but with the great decline in the value of wool during the last few years, it became necessary for the sheep owners to dispose of them or in some way to so conduct the breeding and feeding that the meat product would equal or exceed that of the wool in value. Those who

found it necessary to exchange the wool breed for some of the larger so-called middle breeds learned that the methods pursued with the Merinos profitably would not give satisfactory returns with these English mutton breeds. The business had to be learned anew, and frequently discouragement instead of success was the result, which eventually led to the abandonment of sheep husbandry.

While the Merinos would thrive in large flocks on rather indifferent pasture, providing it was not too wet during the summer, dry feed and a suitable grain ration for the winter, it was soon found that the distinctively mutton breeds would not produce as desirable mutton on this food as the same breeds produce in England, where succulent food is fed throughout the year. It is now generally admitted that the best-flavored, juicy mutton cannot be produced by the food and care heretofore given by the American farmer to Merinos.

In the Cornell experiments, good care and feed were given, including grain, beets, silage, etc., and the Horned Dorset and Shropshires were crossed upon the Merino. The Dorsets bred earlier and fattened better lambs.

### TRACK AND FARM.

#### Better Outlook for Good Horses.

The upward tendency in the market for good horses has been frequently mentioned of late, and it seems to become more marked as the weeks go by. The New York *Herald* thus surveys the situation:

Business all around among the private dealers in horses, at the auction marts and with the carriage makers is brisk, better than it has been for many months. Although the private dealers are selling a large number of horses and getting good prices for them, such figures can hardly be taken as representing the tone of the market. That can only be inferred from what is done in the public auction-ring, where the buyer and not the seller sets the value. Judging by this standard the tone of the market is most certainly improved. This applies entirely to auctions of representative stock, such as that recently marketed at the special sales of the past two or three weeks. The "bargains" which bring down the average at most sales are generally horses consigned in lots of from one to three or four, and as a rule they bring about as much as they are worth. The one trouble with the local horse market just now is not that good prices cannot always be secured for good horses, but that there are comparatively so few really good horses to attract the buyers who will give big money for anything they fancy.

The *Breeders' Gazette* says that the "trouble" mentioned has long existed. Men have bred haphazardly and reaped the results, and then quit the business because the misfits they put on the market went for just about what they were worth. The good horses are comparatively few. Especially is this the case with heavy carriage horses. We notice that Henry Fairfax is not complaining for a market, which takes his half-bred Hackneys at an average of \$730. We observe that John A. Logan Jr. is not finding fault with a market that takes his horses at an average of \$430—horses that he has managed to pick up out of the general wreck wrought by breeding for speed alone, and turned into what may be termed "imitation heavy harness horses." It required no little search to find these horses and skill to fit them, but when they were made ready for market they sold very well.

*Draft Horse Famine in Prospect.*—The *Gazette* in another issue holds that there will be a great shortage of good draft horses as the result of the last two years of non-breeding. At present, it says, there can be but one forecast to the situation, viz., the end of the century will find our markets practically bare of big horses of the right stamp. Even the wayfaring man can figure this out. From every farming district in the land we get the same report, as follows: No breeding of any consequence in progress; few colts last year and practically none this spring! And not only this, but a buyer connected with the export trade is our authority for the statement that 60 per cent of the current receipts of horses of all descriptions in the Chicago market are mares! Stallion keepers without an occupation and the mares going by tens of thousands into the barns of the big dealers in the great cities of the North and of Europe! From these stables they never come out save to begin a career of drudgery in the traces which leads to but one place—the bone-yard. Where are the colts to make up the requisite future supply to come from?

It is pleasant to note that a few men who have not lost their heads have retained some good mares and have kept them stunted to stallions of a proper sort. These are the men who will not be found without choice "drafters" to sell when the day of reckoning arrives. Evidence is accumulating to show that by another spring many farmers will want to patronize the stallion keeper again, but the colt crops of 1894, 1895 and 1896 will be found light beyond all repair. Those who begin next spring will be in time for the markets of about 1902. The fact is we have now to practically begin draft-horse breeding anew. We have lost substantially all that was gained at such great cost in point of weight and quality by the free patronage of pure-bred horses during the twenty years ending with 1893, and the coming year will witness the beginning of the work of reconstruction.



## THE HOME CIRCLE.

## Room at the Bottom.

"There is room at the top," has been preached by our preachers. Been sung by our poets and taught by our teachers. Until, by such teaching, grown wiser and sadder, We have almost forgotten the foot of life's ladder.

There is room at the bottom, O souls transcendental, Who dwell in thin air on the mountains of Mental! Come down from your perches on pinnacles stellar And visit your brothers who live in earth's cellar.

There's room at the bottom, O seers and dreamers! Come, shove out your banners and fling forth your streamers; Come, lend us your aid in our painful progression, Fall in line at the lead of the great world procession.

There's room at the bottom, O builders of nations! The bricks ye must build with are men of low stations: The clay of the valley with straw must be tempered Before your Tyrannus can e'er be sic semper-ed.

There's room at the bottom, O zealous reformers! The world is not turned by the cranks and barnstormers Who sit up aloft as the crowd passes under And flash forth their lightnings and bellow their thunder.

There's room at the bottom, O saints who seek sinners! The path of the lowly is trod by soul winners. Come down from the mount of your transfiguration And to common men preach the common salvation.

There's room at the bottom, O men of all stations! Be not drawn aside by their trite iterations From the commonplace duties which lie at the bottom; High places are quite hard to hold when you've got 'em. For the road to the top leads o'er rockiest ledges; Who climbs must hold on by the raggedest edges, And many a man who has missed his vocation Is brought to himself by a bad dislocation!

—Arthur Edward Johnson.

## The Prisoner.

Almost any one would stop and look over the trig fence at the farmhouse behind the row of Lombardy poplars and the pink azaleas. There was a neatness about the furrows, a fat, sleek contentment about the cattle in the pasture, and the brook under the willows was so pretty. Nevertheless, Adam Hull would have hurried past—for he was expecting to meet his wife at the station two miles away—had not a dog's howl smote his ears. He was a tender-hearted man with animals, and he stopped. His handsome, fair face darkened.

"Well, he is a mean man," he muttered; "if he ain't beating that dog I gave Aggie!"

But he reflected that the train would be due in half an hour, and, shutting his ears, he lifted the reins. Yet he didn't go on. Instead, with a flushed and knitted brow, he sprang out of the wagon and ran into the yard. The dog's sharp yelps had trailed off into whimpering cries. He lay on the ground, and over him stood a man with a whip, who, in turn, was clasped in the arms of a young woman. She thrust her slight figure between the man and the trembling beast.

"Whip us both, then," she cried. "Let go that dog!" the man said, not loudly, but with concentrated passion in his tones.

"I won't!"

"Then I'll make you."

"You coward!" sobbed the woman. "Oh, you mean, cruel coward!"

The man straightened himself up, and as he did so, shifted his whip from one hand to the other. Something flashed silver white when the right hand appeared again. "If you don't let go that dog and let me lick him for chasing chickens, I'll kill him!" said he.

The woman lifted her white face

"It isn't because he chased chickens that you want to kill him; it's because he loves me and I love him. You torment him to hurt me."

The man stood looking at her darkly. Adam hesitated. There were stories afloat about Ned Bruce's temper and his furious disregard of consequences when in a passion. "If he strikes her I'll interfere, gun or no gun!" thought Adam, lingering in the shadow of the poplars.

He did not strike her; he flung out his arms in a gesture of anguish, of anger, of rage dumb and impotent; then he strode away.

Only the sound of the woman's weeping and her broken words of pity and caressing to the dog were heard. "I shall have to, poor Jump," she sobbed; "I can't bear to see him abuse you so, day after day! There's where he threw the hot water on you just because you came into the kitchen. Poor Jump, good Jump! O, Jump, it won't hurt you if I kill you! It would be me, me that it will hurt!" The tears were flowing unrestrained, while the dog strove to comfort a grief he did not comprehend by wagging his tail and licking her face. Adam Hull stepped hastily forward. His wife afterward told him that he ought to have pretended to come from outside, after a decent interval and plenty of warning noise; but he blundered in, choking with sympathy.

"Don't feel so bad, Aggie," cried he. "Give me the dog; I'll take care of it!"

The woman lifted her pretty, tear-stained face and made a piteous effort at composure. "I am just as silly as I can be," she said. "Mr. Bruce wanted to whip him for chasing chickens, but I can't bear to have him punished, he howls so!" She rose to her feet as she spoke and arranged her disordered dress. Very pretty she looked as she stood there, in her thin gown with its crumpled roses, and her cheeks the color of the printed flowers. But Adam Hull was not thinking of her beauty. "Rather ruefully he asked: 'Does he chase chickens bad, Aggie?'"

"No, he never chased them before to-day," answered she. And he did not notice that her tone had changed; it was colder and quieter. "I think it was a mistake and just for fun to-day, for he went around the yard with me every day and he never bothered anything. But he is just young and playful."

"I guess he won't bother the chickens," Adam nodded, as if reassured. "He's the kind of dog a lady would get fond of, don't you think?" There was a note of irresolution in his voice masked by cheerfulness.

"Oh, yes," said Aggie, eagerly, "she couldn't help it. He knows tricks!"

Adam nodded again. "I guess you better let me take him home. I guess he sorter bothers Bruce."

Bruce, for his better convenience in thrashing the dog, had tied a rope to his collar; by that same rope Jump was led away, to be finally hoisted into Adam's wagon. Neither Adam nor Mrs. Bruce noticed that Bruce, behind the grape vines, directed a burning gaze on every motion.

Adam was now in a desperate hurry, and Agnes Bruce had no time for more than a single glance at the wistful eyes of the hound.

"Thank you, Adam," was all she said, to which Adam responded in an embarrassed way, "Oh, that's all right, Aggie. Ella will drop in some time and tell you how he gets along!"

Then she was watching the dust and the whirling wheel spokes. Very soon she returned. There was supper to get in the house. The burden of her daily life sank more heavily, more hopelessly down on her shrieking shoulders.

"I'd like to steal Ned's pistol and shoot myself," she muttered; "I don't believe it would be wicked—the way things are!"

She had begun to set the supper table, wondering drearily how she could ever have been so pleased as she was over the pretty table linen and the new china. "That was before I

was married," she thought. "Oh, if girls only knew!"

But in general her state of mind was too stunned for even silent words. She crawled about the room, and, half of instinct, repeated every tidy, usual motion in preparing the table. Once or twice her mind strayed dully after Adam; but his presence, that had once been the center of a young girl's romance, failed to move her now. "He was afraid of Ned," she thought, "and he was afraid his wife wouldn't like Jump. He never really cared for me. I wish I never had seen him. Maybe then I wouldn't have married Ned!"

"Dizzily her thoughts crawled backward through her husband's courtship. First, it was Adam came to see her, driving out from the village, where he kept a store, to her father's farm. Those handsome grays that he was driving to-day used to know the way to Alfred Robbins' gate well enough to traverse it in the dark. One day he brought her a hound with long ears and beamy, dark eyes, so swift and agile of limb that Aggie called him Jump. More than once he brought her candy of a choicer sort than he sold in the store, the boxes decked with paper lace and a flattened pair of tin tongs—to Aggie a truly sumptuous offering.

Aggie's mother went about among the neighbors, incidentally mentioning Hull's presence in the house and his gifts to Aggie. The girl never remembered seeing her mother so cheerful. Mrs. Robbins was a gaunt woman, with more wrinkles than her years needed, an anxious eye and a stoop of the shoulders. By unremitting energy she had kept a thriftless husband's head above water, and, unwelcome as every one save the eldest had been, she had loved and tended all her great family. Aggie, however, was her idol, and to have Aggie marry well—marry a man who could "do for her," as she expressed it—was the one vivid hope in her colorless life.

Aggie was nineteen, teaching school, and flinging her meager salary into the hole of the family expenses. To nineteen the first lover who has straight eyes and a good coat on his back is gilded by romance into a hero.

Aggie regarded Adam's narrow shoulders, untanned cheeks and white hands with admiration. She saw how kind was his nature, and she had no doubt that she loved him.

But one Sunday night Adam did not come. Instead, Ned Bruce, who was her father's landlord, followed him into the kitchen. His dark face flushed as he greeted Aggie.

"What's the matter with him?" thought Aggie, carelessly. But he was a lenient landlord and she bestirred herself to help entertain him, although her ears ached, straining after every sound outside which might be twisted into the rattle of wheels. Bruce laughed loudly at her girlish pleasantries. He seemed uncommonly interested in her scholars. After a while, to do honor to the guest, a plate of apples was brought up, and Aggie's mother praised a certain tree in Bruce's orchard.

"They do taste good," said Bruce. "Say, Mrs. Robbins, let me send you over a barrel to-morrow."

The children's eyes were all shining. Each had been provided with half an apple, which was rapidly disappearing. Mrs. Robbins said she wouldn't have children eat much just before they went to bed; there was nothing so unhealthy. The oldest boy sat near Bruce and furtively smoothed the fur cuffs of his overcoat. "I like you," he said, shyly.

The speech made Bruce redden again. "Well, that makes it even," said he "for I like you." But he looked up and smiled at Aggie.

The next day the barrel of apples came. Casually, also, Bruce gave little Jonas a new pocket-knife with more blades in it than any Robbins' boy had ever seen. Jonas was sure he was "an awful nice man," and frankly demanded of his sister why she wouldn't marry him instead of Adam.

"I'm not expecting to marry either of them," replied Aggie, tartly, Nev-

ertheless, she experienced a certain gratitude toward Bruce because he had diverted her mother's thoughts from Adam's absence. She winced at the thought of her mother's disappointment. In fact, she suffered more from the dread of that than from any wound in her own heart.

Since she was ten years old she had been her mother's confidant. She knew every small economy that was practiced in the household. It was she who declined the meat always at supper—meat made her have bad dreams.

"Well, I don't see what's become of Adam," Mrs. Robbins did say a few times during the next fortnight. "Seems to me he acts awful queer!" But before a fortnight was over, an interview with Bruce had changed her approbation of Adam into irritated dread. She only feared now that Aggie cared for him, and she heard with actual relief of his attentions to Ella Rhodes.

"They do say," she told Aggie, "as how he has been courting Ella for a year, but they had a tiff of some sort and they've just made it up, Mrs. Martin told me. I'm 'bout sure she just wanted to be hateful. But I matched her. 'He's been awful attentive to Aggie,' says she, 'but I guess it was only tryin' to keep his mind took up.' 'I hope so,' says I, 'seeing how Aggie has another beau she likes better—'"

Aggie's delicate cheek grew hot. "But you know I ain't, ma—"

"I know you have, Aggie. Ned Bruce spoke to me 'bout you this week, and he's a man Adam can't hold a candle to. Look at the way he's done that farm since his pa died. He owns two big farms and our little one, and there ain't a more respected man. He could go to the Legislature any day if he'd only turn Democrat."

Two months later Aggie married Bruce. To-day, the first months of her married life were passing before her, unformed and shapeless, here a mist, there a startling, vivid scene. "He was good to me for a while," she said to herself, "but then they always are, they say, at first."

He was "awful kind," he really was, until that day he came back from town full of the gossip he had heard about her and Adam. He asked her about it, and he asked her in such a tone that she grew angry. And then—she had heard Ned had a temper, but she did not know what the word meant.

On the table stood the pretty cups and saucers sent her by Adam for a wedding present. One by one her husband hurled them savagely at the empty stove. She started up to save them, but he held her at arm's length with one iron hand, while the other wrecked cup after cup.

It was just as he turned away, the last saucer gone, that Jump crept into the room. A snarl, like a wild beast's, escaped Bruce. "He gave him to you—that's why you're so everlasting fond of that d— dog," he yelled. Remembering, Aggie put her hands before her eyes as if thus she could shut out the vision of the rage distorted face of her husband, the brutal motion of his foot and the hound's body flying through the window.

That was the first outburst. She

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was too angry to reason. She locked herself in her room. He did not come to it—maybe because he had read the note she left downstairs. Did she perchance hope that he would disregard her hot words and plead forgiveness? If so, she was disappointed. When she came down to breakfast she found the fire lighted and the milk strained as usual, and he was standing, very tall and strange-looking, by the kitchen table.

"I just wanted to say one word to you," said he, not raising his eyes, glowering at the buckle on her belt. "You don't need to lock your door; I wouldn't touch you with a ten-foot pole now I know you think more of another man than you do of me!"

Aggie's lips parted, yet she did not speak. She did think more of Adam, who was always kind to beasts, than of this torturer of her dog. And while she hesitated, he darted at her one strange, tormented look and strode away.

Then began a woeful life. Ned threw himself doggedly into work. Most of the time he did not speak to her at all; but occasionally an excess of anger would possess him, making him almost like a maniac. He never laid his hands on her, but once he cruelly flogged Jump because he would not go back to the house at his command. Another time he flung boiling water on the dog for coming into the kitchen with muddy feet. He had said, the last time, that he didn't mean to hit the dog. The first time his only remark was, "That'll teach him to mind next time."

Yet he was not always unkind, though never pleasant and gentle any more. One day she found a great box on the table, and ranged beside it a dozen cups of the exact pattern and size of those that had been broken. A note was open on one of the cups. It read:

"These are as good as those that fellow gave. I would have sent them sooner, but had to send away for them."

Aggie had experienced a movement of forgiveness, almost of attraction toward him. But at supper he bore the same lowering brow and rigid mouth that she had grown to fear, and her carefully studied words of kindness ebbed away from her lips, as birds fly at the sight of a hunter's gun. Her hand held the new teacup toward him, trembling.

"I'm obliged for the cups," she said. Fear made her voice cold.

"That's all right," he said. In a minute he added, "Did you count them?"

"No," faltered she.

"There's two extra for those there, holding flowers," said he, "and I want them."

"Why, Ned," she asked, "what's the harm of keeping them?"

"No harm, maybe; it's jest my little notion." So saying, he made two strides to the window, where pansies bloomed in a teacup lacking only a handle and a saucer with but a slight nick; cup and saucer he took up in his hand. First he dropped the cup on the newspaper which she saw had been spread on the floor, and ground his heel into plant and china until they were a shapeless mass; next, he flung down the saucer to splinter it, in the same fashion. Something in his face, in his cold fury, frightened his wife. She was silent.

"I don't want any of that d—d fool's truck around!" said he, sitting down at the table. He ate in morose dumbness; but she noticed—that she might have noticed before, had she been older or less absorbed in the tumult of her own feelings—that he showed her a certain deference and observance. Her plate was never empty that he did not proffer something to refill it. He lifted the heavy teakettle and poured the water into the dishpan after supper. He carried the pans of milk into the icehouse where they were kept. He always filled the icebox in the pantry and the woodbox in the kitchen. And until to-day she had at least kept her domestic misery to herself. In one respect, too, her husband

had not disappointed her; his kindness to her people was all she had hoped it would be, and more. There had gone over to the farm, where her father lived rent free, a continual overflow from Bruce's plenty. Jonas had a colt of his own. Her mother had Brahmas and Plymouth Rock fowls among the barnyard plebians of the leaner days. She never wore but she continually gloried in a black silk bought her by her son-in-law. Every time Aggie saw her mother's face, with its new look of placid satisfaction, she resolved afresh not to complain. And Bruce had helped her. Did Mrs. Robbins come, he would always detain her for the next meal. During the meal he might be grave, but he was neither cross nor sullen, and sometimes he spoke to Aggie almost in his old manner.

"There ain't no need of pestering the old lady with our bickerings," he said.

Afterward she wished she had thanked him for showing her that much consideration, but at the time her misery choked her.

Trivial incidents of the same sort thronged on her. "It seems as if he wasn't all bad," she thought, "but then he can be so hateful, and what will I do if he should be cruel, cruel to—"

Even at the thought the poor child broke down and sobbed. "Oh, what shall I do—what shall I do?" she moaned over and over. "I am so frightened. Oh, I hope I'll die! Oh, Lord, I've tried to be a good girl. Please let me die!"

(Concluded in next week's Rural.)

### Gems of Thought.

Education and instruction are the means, the one by use, the other by precept, to make our natural faculty of reason both the better and the sooner to judge rightly between truth, error, good and evil.—Hooker.

The plant of friendship grows only in the warm air of congeniality. Confidence binds its parts together, and is the cohesive power of its nature, while sympathy is the life-given sap coursing through every fiber. It is an evergreen and is indigenous to all lands. It's most beautiful flowers open during the night, and, while a perennial bloomer, it is most fragrant in winter. Time cannot wither or destroy it; age but strengthens and develops.—C. S. Field.

Every man should examine his genius and advise himself what is proper to apply himself to; for nothing can be more distant from tranquility and happiness than to be engaged in a course of life for which nature has rendered thee unfit; for an active life is not to be undertaken by an unactive person; an unactive life by an active person; to one, rest is quiet and action labor; to another, rest is labor and action quiet; a mild and timorous man should avoid a military life, a bold and impatient man the easy; for one cannot book war nor the other peace.—Epicurus.

### To Keep a Muslin Dress.

To keep muslin dresses looking fresh, they should not be allowed to hang in closets with woolen dresses, or where the door is opened frequently. A dress that is kept in a wardrobe divan retains its sparkling crisp look long after one that is hanging in a much-used closet. If you have no wardrobe divan, lay a skirt in a bureau drawer and fold the skirt over the top—not at the bottom. Then put the waist in a dress box, with all the ribbons and accessories. If bureau drawers are scarce, there is still another plan. Buy half a dozen of the long dress boxes that dry goods stores use to hold ready-made gowns when sent home. Put the skirt and waist into one of them. These boxes can be piled under the bed or lounge, and so kept out of sight. Even the dampness that enters a room through an open window is sufficient to take the crispness out of the muslins and organdies, and they never look as well afterward,

### Fashion Notes.

A gown that sounds very simple, but is very fetching, is of a golden-brown crepon, with the figures in the ribbon outlined with gold paillettes. The hat worn with this gown is a burr-colored straw trimmed with petunias in all colors, and the gloves match the straw. In fact, burr-colored gloves have quite taken the place of white gloves for dressy occasions, unless the costume calls for the white touch, and only the glaze kid is seen.

Black satin is much worn for skirts and sleeves. A stunning costume has a waist of green silk covered with black accordion-plaited mousseline de soie. The wide collar, arranged over each shoulder, back and front alike, is of moss-green velvet, spotted with jet in fanciful forms, trimmed around the edge with cream lace and connected with the belt in front by three narrow straps of jet, on either side, which droop carelessly over the blouse. The wide flaring skirt and gigot sleeves are of plain black satin.

A charming gown of brown silk crepon has bretelle straps of black and white ribbon edged with blue over the shoulders, and a wide yoke collar of finely tucked lawn and lace insertion and edge. Tiny squares of lawn edged with lace form the cuffs. The lawn neckband, tied in a bow in front, might be very prettily replaced by a plain band of the striped ribbon, with squares of lawn, like the cuffs, arranged around the neck.

A waist model for a gray crepon dress has a short jacket, pointed in front, with draped reverses of gray velvet and ecru lace lapels underneath, worn over a pink silk vest made with a box plait and belt and collar of the same with two lace points, while points of guipure trim the sleeves at the elbow.

A pretty model for soft silk is gauged in a circular yoke and fulled into a belt of silk covered with lace. The folded revers and square collar in the back are of the silk edged with lace insertion and satin ribbon.

### Curious Facts.

Brazil has 3,200,000 square miles, or about the area of the United States, excluding Alaska.

A Londoner makes money by lending £1000 notes to be exhibited at weddings as the gift of the bride's father.

In Mexico two substitute jurymen act with the regular jury, so that sudden illness will not affect the verdict.

The skeleton of an average whale is said to weigh no less than 50,000 pounds. This is not a fish story. The whale is not a fish.

The railroad across Siberia will be four thousand miles long when finished. The two sections now operated are 761 miles long.

The natives of Sumatra have a visiting card consisting of a piece of wood about a foot long, decorated with a bunch of straw and a knife.

The production of aluminum has increased from 150 pounds in 1884 to 339,629 pounds last year. During this time the price has dropped from \$9 a pound to about 70 cents.

It is reported that at some of the markets in Minnesota wheat five and six years old has been brought in by farmers, the owners saying they would hold all intermediate crops.

Perhaps one of the very oddest monuments is the tablet in memory of a soldier who had his left leg taken off "by the above ball," the actual cannon ball being inserted at the top.

## DOMESTIC ECONOMY.

### Domestic Hints.

**CHEESE PUDDING (ENTREMET).**—One pound of grated cheese, four eggs well beaten, four tablespoonfuls of cream, four ounces of butter melted. Beat all together, put into a butter dish and bake fifteen minutes. Turn out and serve.

**SEED CAKE.**—One cup of butter, two of white sugar, three eggs, half a cup of caraway seeds, and flour enough to make a stiff paste. Sprinkle the board with sugar, roll out the dough very thin, and cut it in rounds. Bake about fifteen minutes.

**SPANISH FRUIT PUDDING.**—Line a baking dish with a light puff paste, add a layer of shredded pineapple, and cover with sugar; add a layer of sliced oranges, and then a layer of bananas sliced; sprinkle with sugar. Repeat the process until the dish is full. Cover with a light puff paste and bake.

**MUFFINS.**—Beat together one cup of butter and one cup of sugar. Add three well-beaten eggs and one pint of milk, stirring well. Then add one quart of wheat flour sifted with two teaspoonfuls of baking powder and one cup of yellow Indian meal. Bake in muffin rings in hot oven.

**MINT SAUCE.**—Four dessert-spoonfuls of chopped mint, two of granulated sugar, and a quarter of a pint of vinegar. Wash the mint, which should be young, freshly gathered and free from grit. Pick the leaves from the stalk, mince them very fine, and put them into the gravy boat. Add the sugar and vinegar, and stir till the sugar is dissolved. This sauce should be prepared several hours before serving.

**BOILED SALAD DRESSING.**—Thoroughly beat five eggs, put into them five or six tablespoonfuls of vinegar, two even teaspoonfuls of made mustard, one teaspoonful each of salt and sugar, half a saltspoon of red pepper, two tablespoonfuls of oil and a pint of cream. Cook in double boiler till it thickens like soft custard. Stir well. This will keep in a cool place two weeks, and is excellent for lettuce, celery, asparagus and cauliflower.

**SCALLOPED EGGS.**—An appetizing way to serve eggs for breakfast is to scallop them according to the following directions: Boil them hard, chop them not too fine. Line a pudding dish with a layer of bread crumbs, then a layer of cold boiled ham or bits of fried ham chopped fine, then a layer of eggs, and so on until the dish is full. Season the layers with salt, pepper and little bits of butter. Moisten with a little cream and set into the oven for ten minutes, or until thoroughly heated.

Teacher: "What is the meaning of the word 'excavate'?" Scholar: "To hollow out." Teacher: "Give me a sentence in which the word is properly used." Scholar: "The small boy excavates when he cuts his finger." —Tit-bits.

An Irishman, walking along with Biddy, saw a Chinese laundry sign made like a staff with musical notes. "Och, Dinny," said Bridget, "wot's that?" "Shure, I dunno," said Pat; "but if I had my fiddle I'd play it, bedad."

"In your profession, especially, I suppose time is money." "I do not find it so," answered the musician; "I do not find it at all difficult to keep time."—Indianapolis Journal.

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## Patrons of Husbandry.

From National Master Brigham.

DELTA, O., May 25, 1895.

To the Order of Patrons of Husbandry: The winter of '94-'95 has been a period of growth for our Order. The farmers are more than ever convinced of the absolute necessity for a thorough organization of their forces for mutual protection and advancement.

Representatives of all the great interests have perfected thorough organizations, national in their character. This has not been done without due deliberation and distinct purpose. The difference between these representatives and farmers is that the former act up to their convictions, while the farmers hesitate and postpone action.

We cannot afford to delay longer. "We must move out of our works and force the fighting." Everybody despises a coward—one who will not defend his own home interests. We appeal, therefore, to brave and true men and women to harmonize minor differences, and unite in the support and defense of the all important interest of our country. We can "agree to disagree" on partisan questions, settling such differences in the arena of politics, but on the general question of better social and educational advantages for the farmers, equal taxation, rigid control of all corporate bodies, and a fair distribution of the profits of labor, we can agree and co-operate.

We should do this now. Delay will entail loss and increase the difficulties. I therefore urge every member of the Grange to do valiant service for the Order we all love by attending all meetings of his Grange and actively contributing to the interest of the same.

Talk to your neighbors, furnish them with reading matter; make use of the press; give liberal support to all papers which are friendly to our purposes. These have been valiant soldiers in our army for years. Show your appreciation by extending their circulation. Secure a hearing in every paper that will admit Grange literature. It is the most effective way of reaching the masses of the farmers.

If all will unite in this work the call for organizers will soon be heard from many localities where the important educational work of the Grange has long been neglected. Let responses come from every quarter where public-spirited men till the soil, and noble, brave women make model homes and Granges.

In conclusion I desire to congratulate you upon the brighter prospects for agriculture. Advancing prices for farm products should encourage us all to till our fields with diligence and skill. "The people must be fed." The large surplus of wheat, accumulated during the years when production outstripped consumption, is rapidly disappearing, and when it is exhausted normal prices will prevail.

The cattle that have crowded home and foreign markets, forcing prices below the cost of raising, are now discovered to be in short supply, and the inevitable result follows. "The law of supply and demand" always has and always will be the chief factor in fixing prices. If the demand exhausts the supply, prices will be very high. If there is a surplus, prices will be lower.

It is not advisable for farmers to abandon staple products because prices are low. The reaction is sure to come; the horse and the sheep will again find favor in the eye of the thrifty husbandman; and the same will prove true of other farm products that are not bringing satisfactory prices. This should encourage us to look closely after the details of farming. It is wise to study and discuss economic questions. The farmer must be able to analyze and eliminate the sophistry and unsound doctrine from the remedies proposed by many of their would-be advisors.

It will be a great misfortune to our country if the great power lodged in the agricultural class is not intelligently used. The farmers, therefore,

are in duty bound to think, investigate and decide with great care upon the public policy that shall have their support. They should not be deceived by glib-tongued orators, whose range of utterance is as circumscribed as that of a parrot. It will not do to rely too much upon legislation for relief. It is as true at this time as ever, that "He who by the plow would thrive, must either hold himself, or drive."

Diligence, skill and economy are still essential to success upon the farm, as well as elsewhere. The Grange should impress this truth upon the minds of farmers everywhere, and be a safe as well as hopeful leader of thought in all that pertains to the welfare and progress of a great, free people.

"In Faith, Hope and Charity, with Fidelity," I bid you godspeed in the grand educational work in which we are engaged. Fraternally,

J. H. BRIGHAM,  
Master National Grange, P. of H.

### Observations by Mr. Ohleyer.

The Highland Camp proposition, I am glad to see, is assuming definite proportions; and if anything was lacking by way of commendation, it was generously supplied by the clever pen in the hands of Bro. Amos Adams in the last RURAL. Not a patron in all California can object to the scheme as outlined by the Executive Committee. All, of course, cannot avail themselves of the opportunity of so charming an outing, hence it is to be hoped that their interests will not be lost sight of by the leading spirits in the play. Bro. Adams suggests an appropriation of \$250 by the Executive Committee of the State Grange for the purpose of aiding in the preparation of the grounds. I will not question the authority now, and would even strain a point in its favor. But how many \$250 lumps have the committee to invest in such laudable enterprises? We may be sure that, were the precedent once established, half a dozen appropriate and romantic localities would offer inducements on the terms proposed. Why, sir, I could, if necessary, suggest as many spots in Sonoma county alone and as many more in Napa county, to say nothing of Marin, Alameda, Contra Costa or Solano. I have seen nooks, dells, crystal fountains and stately oak groves in the counties named where one might rusticate a lifetime without becoming tired, provided, of course, that the necessities of life were at hand. The Highland scheme will be successful because it deserves to be and for the other very good reason that the pilgrims reside near the Mecca.

The great daily newspapers of the American cities and of all other countries, for aught I know, are running into the pictorial business. In this direction, San Francisco is trying hard to excel them all. It used to be thought that a "news" paper was something different and distinct from a pictorial publication, but it seems the idea has become extinct. It may be presumed that the departure is in response to a popular demand and that the flashy pictures help the sale of the papers. It was related that so eager was the demand for horrid pictures during the Emanuel Church affair that one journal got up a cut of a third woman being found inside of the altar and on the point of being taken out, dead of course; and the paper and the picture were sold on the streets of the city when the entire scheme was a fraud. Better things were expected from the last two that succumbed to the fashion. I refer to the *Call* and the *Bulletin*, and the writer fails to be convinced that either has been improved by the change. There is, of course, a general desire to be "up to date" in all things. Considering this, it is to be hoped that "dates" may soon bring about a reform, and that size, sensation and ghastliness will cease to be considered appropriate material for the up-to-date family paper. In justification, they would probably say that they are only supplying a popular demand; but don't

they first create the thirst, then proceed to appease it?

California, Oregon and Washington constitute the Pacific Coast Grange field, and being so widely separated from their elders the cultivation of the crop depends largely on home talent and home culture. This field has received unusual attention the past few months and the crop has been cultivated and strengthened in all directions. Perhaps it may be of interest to observe the doings of the before-mentioned elders during their spring months, and having recently been favored with a number of first-class Atlantic Coast Grange papers, I have culled out a few notes that will indicate the warmth of the Grange fire on Eastern altars. First comes the Grange in

### MAINE.

East Sangerville Grange has increased 38 the past season.

Aroostic Grange admitted nine candidates, and have more applications.

Victor Grange will hold a fair this fall.

Sangerville Grange recently admitted 27 new members.

Carroll Pomona has added over 100 members since January 1st, and another 100 are ready to follow.

Crooked River Grange is going to decide who has been the greatest benefactor of mankind within the present century.

Canton Grange instructed a class in the third and fourth degrees, and more are coming.

Oxford Pomona had so large an attendance they had to adjourn to a larger hall. Eleven candidates were initiated.

### VERMONT.

Williamston Grange is prospering and teaching.

Essex Centre Grange is growing. Corn was the topic at a recent meeting.

West Branch Grange is conferring degrees and is prospering. Twenty-eight new members have been admitted the past year.

Lamoille Grange is moving. New members come in every meeting. May 9th the sisters discussed "What is the most profitable housework and what the most unprofitable," after which the brothers discussed what line of farming to follow this year. One brother advised a generous cultivation of small fruits, if not for profit for the health and happiness of his family. Another intended to raise a mortgage this year.

Vernon Grange is holding pleasant and profitable meetings. The last meeting was devoted to the discussion of fertilizers.

### RHODE ISLAND.

Conanicut Grange is enjoying a season of prosperity. The meetings are well attended and full of interest. Tuberculosis of cattle was discussed, showing much interest in the question. Ladies' night was a great success.

### CONNECTICUT.

All Granges are moving. Preston City Grange held an open meeting May 7th. Professor Phelps, of Storrs Agricultural College, gave an interesting talk on dairying.

Jewett City Grange held Arbor night. Among other questions discussed was, "What is the best thing in life?"

Tunxis Grange held a social at the residence of Master T. E. Griswold, May 8th. The ladies in the afternoon finished a silk crazy quilt, which is to be drawn in June. On May 17th education and the present school system were discussed.

### NEW HAMPSHIRE.

Franklin Grange celebrated Arbor day by setting out trees.

Nashan Grange has added twenty members during the winter and spring.

All signs point to renewed prosperity in the work of the Order in Hudson.

May 4th Spafford Grange instructed ten in the third and fourth degrees.

Daniel Webster Grange, April 18th, had much fun, growing out of the offer

of prizes for the most shabbily dressed attendant at that meeting.

Lowell Grange, Washington, is enjoying a season of prosperity. It added four new members, purchased a new organ and held a successful calico ball.

At Honor Bright Grange, May 10th, the programme consisted of selections from the Grange library, by questions from the question-box, and singing by the choir.

At Rochester Grange, May 11th, the third and fourth degrees were conferred. The meeting was so enjoyable that Sunday came before all left the hall.

At Surrey Grange, April 24th was young folks' night. Dialogues, recitations and singing were interesting. May 8th was married folks' night, with tableaux, readings, recitations and a paper; also pie, cake and coffee in abundance.

### MASSACHUSETTS.

Southboro Grange is growing rapidly. Royalton Grange conferred degrees and was inspected.

At North Andover Grange, May 7th, eleven were instructed in the degrees. The Grange held a public meeting on the evening of May 21st.

Athol Grange conferred degrees May 10th. About 100 Patrons were present, including visitors from neighboring Granges. A pleasant evening was enjoyed.

Petersham Grange is adding to its members.

Brookville Grange on gentlemen's night listened to readings and declamations and music. Lunch boxes were provided by the brothers, and a lively Virginia reel wound up the entertainment.

Stoughton Grange is growing. Co-operation was recently discussed, and the narration of current events by the younger members proved interesting.

East Medway Grange is in the throng and recent discussions were interesting and profitable.

These notes could be continued indefinitely, but space forbids. They show such activity in the Grange cause as should cheer the heart of every Patron of Husbandry in these Western States to renewed effort to build up the Order. We want the leading agriculturists to assist in these beneficial movements, for we are all linked together in interest, whether we belong to the Order or not. G. O.

Yuba City, June 10, 1895.

### Oregon State Grange.

A letter from Oregon City, dated May 30th, says:

The last Oregon Legislature was pretty well roasted in the State Grange to-day. When it came time to consider the report of the committee condemning the extravagance of the Legislature, Judge Boise of Salem and Judge Hare of Hillsboro both made quite long addresses showing the unconstitutionality of many of the appropriations. Judge Boise in particular dwelt upon the unconstitutionality of appropriations for the support of various homes and for private schools. A number of others discussed the subject in the same vein, and the report of the committee was unanimously adopted.

The report of the committee on transportation was of considerable length. It estimated that the railroads of this country are trying to pay interest on \$6,000,000,000 of bonds owned in Europe, which, at 5%, makes \$300,000,000 a year drawn from this country for the single item of interest charges. Probably as much more goes for repairs, operating expenses and profits. Much of the last stays at home, except that sometimes a large slice of the profits is paid to some European count (or no account) to compensate him for condescending to marry the daughter of one of our managers.

The total yearly cost of maintaining the railroads of the United States was placed at \$10 per capita, or \$50 for each family in the land. It was declared that this appalling expenditure



is practically irreducible, for the expense is nearly the same whether the volume of business handled by the roads is large or small. A brief statement was made of the relation of railway corporations to the people, but that point was not commented upon.

Passing to wagon roads, the report recommended a system of grading and ditching not especially new, and it urged with vigor the vital importance of improving country highways. It was shown that the power necessary to move a ton on a level railroad is eight pounds; on the best wagon road, fifty pounds; on an ordinary wagon road, 250 pounds; and on bad roads, 800 pounds or more; that is, the rolling friction is equal to that many pounds in each case. An ordinary team will pull 400 pounds all day. It requires sixty pounds more power to draw a ton up a three per cent grade on an ordinary wagon road. The weight of the average farm wagon is 1000 pounds. From these, and several tables of similar facts, it was specifically shown how the farmers would be the gainers by a system of good roads. The report closed with a reference to the probability that electric motor roads would soon be helping the farmers a great deal in their struggle to get their crops to market.

The special committee that has been working two years on the initiative and referendum proposition presented its report to the Grange this afternoon. This is a joint committee in which the Grange, the Farmers' Alliance, Knights of Labor, the Federated Trades and Central Labor Council, of Portland, are represented, W. D. Hare being the Grange representative. The report consists of a number of type-written pages, reciting the history of the initiative and referendum movement in Oregon, and attributing its defeat in the last Legislature to ignorance and sculduggery. In some of its references it is quite pointed and personal, and it is certain not to be adopted in the form in which it was presented. This matter will receive the attention of the Grange at its closing session tomorrow morning.

A resolution from Salem Grange recommending that the degrees of the Order be reduced from six to two was considerably discussed, but the adverse report of the committee was sustained. O. P. Lent, of McMinnville, was chosen the new member of the State Executive Committee. A resolution from McMinnville Grange favoring the election of United States Senators by popular vote was concurred in. This evening a class of 100 members took the fifth and sixth degrees, this being the largest class for a number of years.

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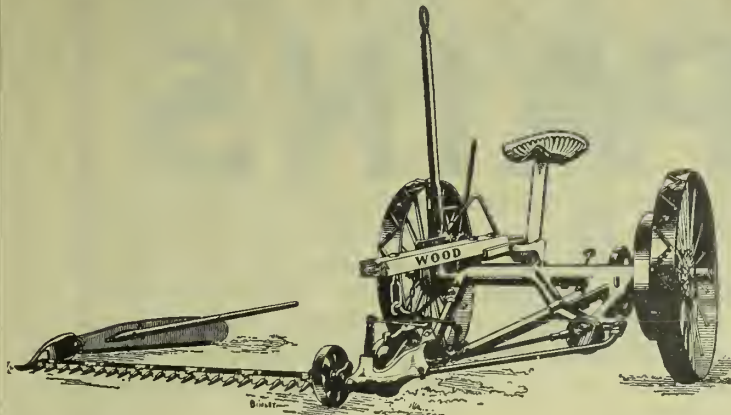
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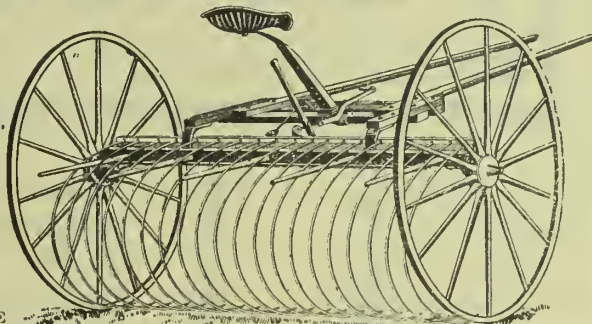
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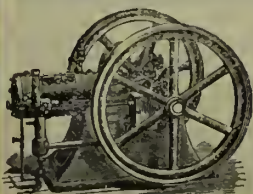
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## Dagos and Gringos.

There can be no doubt that the word Dago is derived from the Portuguese word Diego (James), the patron saint of Portugal. About thirty-five years ago an exhaustive research was made to ascertain the derivation of this word, with this result: The first recorded instance of its use was a customs entry, about the year 1820, of a ship belonging to Davis & Brooks, which traded between New York and Mediterranean ports. The skipper, after writing in the entry his name and that of his mates and American sailors, wound up with and "three Dagos." He was asked for an explanation by the Custom House people, showing that the word and its meaning was new to them. He replied that he meant three Portuguese, all of the same name, Diego, which he had spelled incorrectly, and that he had shipped them at Funchal.

In those days Italian sailors were seldom found out of the Mediterranean, and Spanish sailors only on Spanish ships, but the Portuguese sailors would take a berth on any craft without regard to the flag it sailed under, so it was very hard to find ashore without two or three natives of either the Azores, Canary, or Cape Verde islands among the crew. They made splendid sailors and worked cheap, an important consideration in the eyes of Yankee skippers, particularly whalers, who invariably sought these islands on their way to the Pacific to complete their crews and catch the southwest trade winds.

The name Diego was so plentiful among these Portuguese sailors that it got to be the custom to call them all "Diego" or dago, much as all the Chinamen are called John. As they were a good-natured lot they took it kindly, until along in the 40s the manner of its application became offensive to them. Since then it has been applied to Spaniards, Italians and all dark-skinned people other than negroes.

An equally interesting story can be told of the word gringo, so much used by our Mexican neighbors. The accepted version of this word's origin is to the effect that some American sailors, ashore on the harbor of Mazatlan, getting water, sang the old ditty, "Green Grow the Rushes O," and the natives took kindly to the melody, ever afterward calling the Americans gringos. The year 1845 is given as the date of this happening. Now, as long ago as 1825 the firm of Howland & Aspinwall did an immense business with the west coast of Mexico. Their agents in Mazatlan were the Messrs. Barre & Kennedy. There is in New York city, in the family of Robert Lennox Kennedy, a letter from Mr. Lewis Barre of this firm, dated Mazatlan, 1825, which speaks of an entertainment at his house, and that on the recommendation of one of the captains of Howland & Aspinwall's ships in the harbor, a sailor furnished the music. The captain vouched for him as being a very talented fiddler, and it turned out that the fellow played but one tune, "Green Grow the Rushes O." This was his entire repertory. They danced everything to this tune, singing the song at the same time, and the entertainment furnished lots of fun.

In a subsequent letter he writes that from this entertainment his Mexican friends had evolved a nickname for Americans that was coming greatly into use, gringo, which was as near as they could come to the pronunciation of "green grow." It is easy to see how this word could become a word of opprobrium among people who did not know its origin. Certain it is that, Mr. Barre, an old and respected merchant in Mexico, had never heard of it previous to this time, 1825.

In the continued use of the eyes in such work as sewing, typesetting, bookkeeping, reading and studying, the saving point is looking up from the work at short intervals and looking around the room. This practiced every ten or fifteen minutes relieves the muscular tension, rests the eyes and makes the blood supply much better.



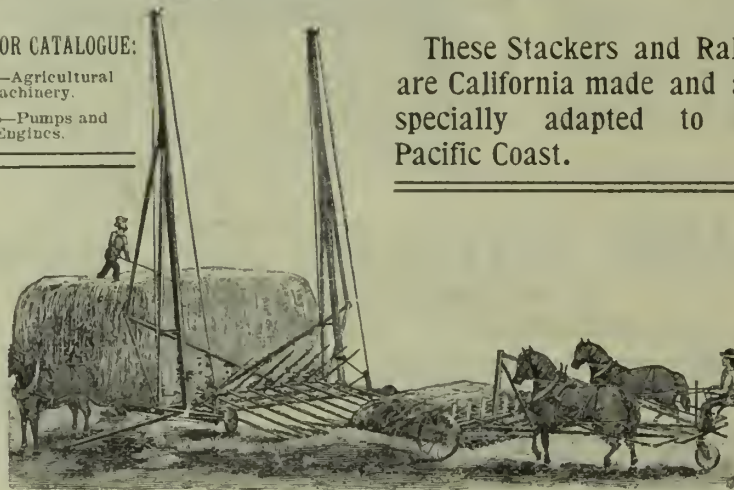
and aches of an annoying nature, a torturous nature, a dangerous nature, can be quickly and surely cured with Pain-Killer. As no one is proof against pain, no one should be without Pain-Killer. This good old remedy kept at hand, will save much suffering and many calls on the doctor. For all summer complaints of grown folks or children it has stood without an equal for over half a century. No time like the present to get a bottle of

## Pain-Killer

Sold everywhere. The quantity has been doubled but the price remains the same, 25c. Look out for worthless imitations. Buy only the genuine, bearing the name—PERRY DAVIS & SON.

### WRITE FOR CATALOGUE:

- No. 14—Agricultural Machinery.  
No. 15—Pumps and Engines.



These Stackers and Rakes are California made and are specially adapted to the Pacific Coast.

### Jackson's Improved "Eclipse" Stacker and "Acme" Rake.

**NOTICE.**—We have discontinued our Sole Agency for the "Eclipse" Stacker and "Acme" Rake, heretofore controlled by the Deere Implement Company, of San Francisco; and they will no longer represent us.

Henceforth we will supply these Stackers and Rakes direct to the trade. We carry a large stock on hand; and all orders will receive prompt attention. Send your orders direct to us, or through your local dealer.

**WARNING.**—These Stackers and Rakes are fully protected by Letters Patent. BEWARE of infringements, and inferior, imported machines.

### Byron Jackson Machine Works,

625 SIXTH STREET, SAN FRANCISCO, CAL.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG.

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AMERICAN AND FOREIGN

## Patent Solicitors.

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Elevator, 12 Front St.

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—MANUFACTURERS OF—

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FOR TOWN WATER WORKS.

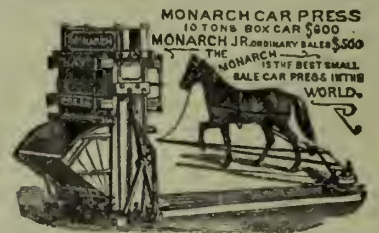
Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes.

130 BEALE STREET, SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.

### DEWEY & CO., PATENT SOLICITORS.

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### Monarch and Junior Monarch HAY PRESS.

Patented by Jacob Price.

—ALSO—

### Double-End HURRICANE Press (Two Sizes).

—FOR SALE BY—

L. C. MOREHOUSE,  
SAN LEANDRO, CAL.  
Wm. H. GRAY, General Agent.

### Porteous Improved Scraper.

Patented April 3, 1883. Patented April 17, 1883.



Manufactured by G. LISSENDEN.

The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Leveling Land, Road Making, etc.

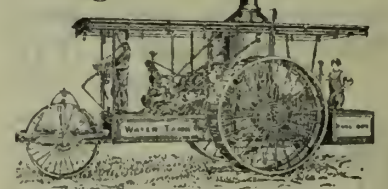
This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

This Scraper is all Steel—the only one manufactured in the State.

Price, all Steel, four-horse, \$40; Steel, two-horse, \$31. Address all orders to

G. LISSENDEN, STOCKTON, CAL.

### Price's Traction Engine.



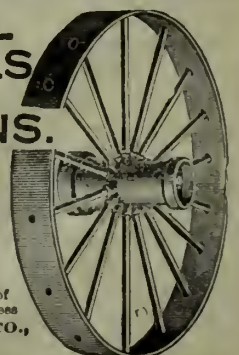
We have one of these engines that was used about one month last season and was taken back by us by reason of illness of purchaser. Engine is in perfect order, and in better working order than when first sent from the factory. A BARGAIN. Indicated power, 80-horse; Cylinders, 8x8; Wheels, 8 ft. high, 28 in. wide; weight, less than 10 tons. Price when new, \$4500.

HOOKER &amp; CO.,

16 and 18 Drumm Street, San Francisco.

### METAL WHEELS for your WAGONS.

Any size you want. 20 to 60 in. high. Tires 1 to 8 in. wide—hubs to fit any axle. Saves cost many times in season to have set of low wheels to fit your wagon for hauling grain, fodder, manure, bags, &c. No resetting of tires. Oat's free. Address EMPIRE MFG. CO., Quincy, Ill.



### STUMP PULLERS HOOKER & CO. 18 DRUMM ST. S.F.



## S. F. MARKET REPORT.

## Market Review.

SAN FRANCISCO, June 12, 1895.

**FLOUR**—We quote: Net cash prices for Family Extras, \$3 40@3 60 ¢ bbl; Bakers' Extras, \$3 30@3 50; Superfine, \$2 25@2 60 ¢ bbl.

**WHEAT**—No. 1 Shipping Wheat is quotable at 95¢ per cwt for new and 92½¢ for old. Milling Wheat keeps steady at 97½¢@1 ¢ per cwt.

**BARLEY**—Feed, fair to good, 57½¢@60¢; choice, 60¢; Brewing, nominal.

**OATS**—We quote: Milling, \$1 05@1 15; Surprise, \$1 10@1 15; fancy feed, \$1 02½@1 07½; good to choice, 95¢@1; fair to good, 90¢@95¢; poor to fair, 87½¢@90¢; Black, nominal; Gray, 92½¢@97½¢ ¢ cwt.

**CORN**—We quote: Large Yellow, \$1 05@1 12½; small Yellow, \$1 10@1 17½ ¢ cwt; White, 90¢@1 05.

**RYE**—Quotable at 87½¢@90¢ ¢ cwt.

**BUCKWHEAT**—Quotable at 85¢@90¢ ¢ cwt.

**CRACKED CORN**—Quotable at \$25@26 ¢ ton.

**CORNMEAL**—Millers quote feed at \$24@24 50 ¢ ton; fine kinds for the table in large or small packages, 30¢@3½ ¢ lb.

**BRAN**—Quotable at \$13@14 ¢ ton.

**GROUND BARLEY**—Quotable at \$14 50@15 50 ¢ ton.

**HAY**—New Wild Oat selling at \$6 50@7 ¢ ton. We quote as follows, old: Wheat, \$7 50@11; Wheat and Oat, \$7 50@10; Oat, \$8@10; Alfalfa, \$7@8 50; Barley, \$7@8 50; Clover, \$7@8; Compressed, \$8@9 50; Stock, \$5@6 ¢ ton.

**STRAW**—Quotable at 50¢@75¢ ¢ bale.

**BEANS**—We quote as follows: Bayos, \$1 30@1 55; Butter, \$1 75@2 for small and \$2@2 25 for large; Pink, \$1 20@1 35; Red, \$1 30@1 50; Lima, \$1 25@1 50; Pea, \$2 50@2 75; Small White, \$2 50@2 80; Large White, \$2 50@2 75; Blackeye, \$3@3 50; Red Kidney, \$2 50@3; Horse, \$1 60@1 70 ¢ cwt.

**SEEDS**—We quote as follows: Mustard, Brown, \$1 25@1 75; Yellow, \$1 75@2; Trieste, \$1 90@2 00; Canary, 3¼@3½ ¢; Hemp, 3¼ ¢; Rape, 1¼@2¼ ¢; Timothy, 5¼@6¼ ¢; Alfalfa, 7½@7¾ ¢ ¢ lb; Flax, \$2 50@2 75 ¢ cwt.

**POTATOES**—Quotable at 35¢@50¢ ¢ cwt for new crop; old, 35¢@50¢.

**ONIONS**—Quotable at 60¢@75¢ ¢ cwt.

**HOPS**—Quotable at 4¢@6 ¢ lb.

**VARIOUS**—We quote: Summer Squash, 40¢@60¢ ¢ small box; Bay Squash, large box, 75¢@1; Cucumbers, 60¢@75¢ ¢ small box; Marysville, \$1@1 50 ¢ box; Asparagus, 40¢@60¢ ¢ box for ordinary and \$1 @1 50 for better qualities; Rhubarb, 35¢@65¢ ¢ box; Tomatoes, \$2@2 50 ¢ box; String Beans, 1½@2¼ ¢ ¢ lb; Refugee, 20¢@30 ¢ ¢ lb; Wax Beans, 1½@2¢ ¢ ¢ lb; Green Peas, 20¢@2½ ¢ ¢ lb for garden; Turnips, 50¢ ¢ cwt; Beets, 60¢ ¢ sack; Carrots, 40¢@50¢; Cabbage, 65¢@75¢ ¢ cwt; Garlic, new, 5¢@6 ¢ ¢ lb; Cauliflower, 50¢@60¢ ¢ dozen; Dried Peppers, 11¢@12¢ ¢ ¢ lb; Dried Okra, 15¢ ¢ ¢ lb.

**FRESH FRUIT**—Apples—Quotable at 40¢@50¢ ¢ box for new, being green.

Apricots—Quotable at 40¢@50¢ per box for Royals. Berries—Gooseberries, 20¢@2½ ¢ ¢ lb; Strawberries, Sharpless, \$4@5 ¢ ¢ chest; Longworth, \$7@8; Raspberries, \$7@9 ¢ ¢ chest and 75¢@81 ¢ 25 per crate for Newcastle.

Plums—Quotable at 40¢@75¢.

Cherries—Quotable at 40¢@60¢ ¢ box for red and black, and 35¢@40¢ for white; Royal Anne, 60¢@70¢. In bulk, 40¢@4½ ¢ for black, 30¢@4 ¢ for white, and 4½¢@5 ¢ for Royal Anne.

Currants—Quotable at \$2 50@3 50 ¢ ¢ chest.

Peaches—Quotable at 25¢@50¢.

**CITRUS FRUIT**—We quote: California Navel, \$1@2; Seedlings, 60¢@81 ¢; Mexican Limes, \$1 50@5 ¢ ¢ box; Lemons, Sicily, \$3 75@4; California Lemons, 50¢@1 ¢ for common and \$1 50@2 ¢ for good to choice.

**DRIED FRUIT**—Following are the prices furnished by the San Francisco Fruit Exchange. The figures presented represent carload lots, smaller parcels occasionally selling at slightly lower rates:

Apricots—Fancy Moorpark, 8¢; choice, do, 7¢; fancy, 7¢; choice, 6¢; standard, 5½¢; prime, 5¢.

Apples—Evaporated, 1¼@1½ ¢; sun-dried, 4¢@4½ ¢.

Peaches—Fancy, 7¢; choice, 5½¢; standard, 5¢; prime, 4½¢; peeled, in boxes, 12¢@13¢.

Pears—Fancy, halves, 5¢; quarters, 4¢; choice, 4¢; standard, 3½¢; prime, 3¢.

Dried Grapes—1½ ¢ ¢ lb.

Plums—Pitted, 30¢@40¢; unpitted, 10¢@20¢.

Prunes—Four sizes, 4¢.

Nectarines—Fancy, 6¢; choice, 5½¢; standard, 5¢; prime, 4¢.

Figs—White, choice, 30¢@50¢; black, choice, 2½¢@3¢.

Raisins—In sacks (50-lb. boxes selling at ¼ ¢ ¢ lb. higher): 4-crown, loose, 3½¢; 3-crown, 2½¢; 2-crown, 2¢; seedless Sultan, 3¢; seedless Muscatels, 2¢ ¢ ¢ lb; 3-crown London Layers, \$1 40 ¢ box in 20-lb. boxes; clusters, \$2; Debesa clusters, \$2 50; Imperial clusters, \$3; 4-crown, loose, \$1; 4-crown, loose, faced, \$1 15 ¢ box.

**NUTS**—Chestnuts, 30¢@50¢; Walnuts, 6¢@7¢ for hard shell, 7¢@9½ ¢ for soft shell and 7¢@9½ ¢ for paper shell; California Almonds, 9¢@10¢ for soft shell, 2¢@2½ ¢ for hard shell and 6¢@7¢ for paper shell; Pecans, 3¼@4½ ¢ for California and 3¢@5½ ¢ for Eastern; Pecans, 6¢ for rough and 8¢ for polished; Brazil Nuts, 7¢@7½ ¢ ¢ lb; Cocanuts, \$4 50@5 50 ¢ 100; Pine Nuts, 20¢ ¢ ¢ lb.

**HONEY**—We quote: Comb, 9¢@10¢; water-white, extracted, 5½¢@6¢; light amber, extracted, 5¢@5½ ¢; dark amber, 4¢@5 ¢ ¢ lb.

**BEESWAX**—Quotable at 26¢@28 ¢ ¢ lb.

**BUTTER**—Creamery—Fancy, 12½¢@13¢; seconds, 11¢@12¢ ¢ ¢ lb.

Dairy—Fancy, 10½¢@11½ ¢; fair to choice, 9¢@10¢; store lots, 7¢@8¢.

**CHEESE**—We quote: Choice to fancy, 6¢; fair to good, 4¢@5¢; Eastern, 12½¢@13¢ ¢ ¢ lb.

**EGGS**—Quotable at 13¢@14 ¢ ¢ dozen for store and 16¢@17 ¢ for ranch.

**POULTRY**—We quote as follows: Live Turkeys—Gobblers, 12¢@13¢; Hens, 12¢@13 ¢ ¢ lb; Roosters, \$4 50@5 for old and \$7@9 for young; Broilers, \$2 50@3 50 for small and \$3@4 for large; Fryers, \$5@6; Hens, \$4 50@5 50; Ducks, \$3@4 for old and \$5@6 for young; Geese, \$1@1 25 ¢ pair; Goslings, \$1 25@1 50; Pigeons, \$1 75@2 ¢ ¢ dozen for old and \$1 50@2 ¢ for young.

**HIDES AND SKINS**—Quotable as follows:

|                                | Sound. | Culls. |
|--------------------------------|--------|--------|
| Heavy Steers, 56 lbs up, ¢ lb. | 10 @-c | @-9    |
| Medium Steers, 48 to 56 lbs.   | 8½@9   | 7½@8   |
| Light, 42 to 47 pounds.        | 8 @8½  | 7 @7½  |
| Cows, over 50 lbs.             | 8 @8½  | 7 @7½  |
| Light Cows, 30 to 50 lbs.      | 8 @8½  | 7 @7½  |
| Stags.                         | @-6    | @-4    |
| Kips, 17 to 30 lbs.            | @-7    | @-6    |
| Veal Skins, 10 to 17 lbs.      | @-8    | @-6    |
| Calf skins, 5 to 10 lbs.       | @-9    | @-7    |
| Dry Hides.                     | 19     | 14     |
| Dry Kips and Veal.             | 15     | 10     |
| Dry Calf.                      | 20     | 14     |

Pelts, Shearlings, 10¢@20¢ each; do, short, 25¢@35¢ each; do, medium, 30¢@45¢ each; do, long wool, 40¢

65¢ each; Deer Skins, summer, 30¢; do, good medium, 15¢@25¢; do, winter, 10¢@15¢ ¢ lb; Goat Skins, 20¢@35¢ apiece for prime to perfect, 10¢@12¢ for damaged, and 5¢ each for Kids.

**WOOL**—We quote spring: Year's fleece, San Joaquin, ¢ lb. .... 6@6½ ¢ 6 to 8 months do ..... 5@8 ¢ 6 to 8 months Calaveras and foothill, free ..... 8@10 ¢ Do, defective ..... 4@6 ¢ Northern, good to choice ..... 9@12 ¢ Do, defective ..... 7@9 ¢ We quote Nevada spring: Light and choice ..... 8@10 ¢ Heavy ..... 6@7 ¢

## California Fruit Sales.

**CHICAGO, June 11.**—The Earl Fruit Company sold California fruit at open auction today, realizing prices as follows: Ventilator car, Clyman plums, \$1.50; Royal apricots, \$1@1.15; Alexander peaches, 95¢; refrigerator car, California Fast Express 732, Royal apricots, \$1.20@1.40; Alexander peaches, \$1.05@1.35.

**PHILADELPHIA, June 11.**—The Earl Fruit Company sold California cherries at open auction to-day: Black Tartarian, 90¢@1.25; half boxes, 55¢; Black Bigarreaus, \$1; Rockport, \$1.20; Governor Wood, 60¢@1.25.

**NEW YORK, June 11.**—The Earl Fruit Company sold California fruit at open auction to-day: Royal apricots, \$1.35@1.55; Alexander peaches, 40¢@1.20; Black Tartarian cherries, 75¢@1.25; Royal Anne, 75¢@1.05; Centennial, 65¢@80¢; Black Bigarreaus, \$1; cherry plums, 75¢.

## List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING MAY 28, 1895.

539,971.—CAN OPENER—W. N. Anderson, S. F.

539,787.—GATE—J. F. Bean, Martinez, Cal.

540,140.—SASH FASTENER—D. A. Crichton, Los Angeles, Cal.

540,150.—SASH FASTENER—D. A. Crichton, Los Angeles, Cal.

540,158.—DRIVE WHEEL—G. S. Fouts, San Jose, Cal.

539,804.—GOLD SEPARATOR—Gibbens & Murray, Portland, Or.

539,806.—PHONOGRAPH—L. Glass, S. F.

540,099.—CAN OPENER—T. B. Hagerty, S. F.

540,057.—CAR COUPLING—T. F. Hudson, Pasadena, Cal.

540,060.—ELECTRIC RAILWAY—W. E. M. Jackson, S. F.

540,061.—BAND CUTTER—W. S. Judd, San Diego, Cal.

539,991.—LEAF TURNER—H. Kramer, S. F.

540,212.—SMOKE CONSUMER—T. P. Magrath, S. F.

539,997.—HAY DEHICKER—D. Ogilvie, Lee, Nev.

540,105.—COIN CONTROLLED APPARATUS—G. F. W. Schultze, Berkeley, Cal.

540,202.—PIPE—H. F. Williams, S. F.

**NOTE.**—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

## Free Instruction on Fencing.

Each month the Page Woven Wire Fence Co., of Adrian, Michigan, issues a circular in the form of a newspaper, called the *Coiled Spring Hustler*, in which all sorts of facts relative to all sorts of fences are given. It is devoted entirely to this subject and each issue affords a liberal education on fencing. Copies of the *Hustler* will be sent free to all who will write to the Page Woven Wire Fence Co., Adrian, Mich. It is well worth sending for before you get at your fall fencing work.

## A GREAT STAYER.

As competition increases it becomes harder and harder for the business man to succeed, and, in recognition of this fact, the public is often informed that this or that thing has "come to stay." A strong purpose is good, but doing the thing is even better. One of the greatest stayers we know of is Pain-Killer, the advertisements of which we are printing elsewhere. This famous old family remedy has stayed in the homes of the country 55 years, and is to-day more popular than ever. This one fact proves its value and makes argument unnecessary. It only remains for the proprietors (as they are doing) to remind each coming generation that for over half a century Pain-Killer has been recognized as the handiest, surest and cheapest cure for the common ills of humanity, and that a bottle on their shelf will sooner or later save them trouble and suffering and money.

## "INDURINE" COLD WATER PAINTS.

A Most Remarkable Material is the OUTSIDE INDURINE. It stands rain and exposure as well as oil paint, and costs only a fraction as much.

It is just the thing for fences, outbuildings, factories, etc., being cheap, durable and easily applied by anyone.

It has no equal as a light reflector for light shafts and court-yards of large buildings. It is supplied in a thick paste, to be diluted with cold water. It is made in white and several colors.

**INSIDE INDURINE** Is designed especially for factories, stables, and general inside work, as a substitute for whitewash, kalsomine or oil paint.

It will not rub or scale, soften or darken with age, and works well over old whitewash. A dry powder to be mixed with cold water.

Both Indurines are perfectly fire-proof.

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WM. BURD, MANUFACTURER, Mills Building, San Francisco, Cal.

## CHOICE FRUIT ORCHARD.

Will be sold cheap; near Los Gatos; 40 acres; the best laid out and best cared for orchard (three years old) in Santa Clara Valley; prunes, peaches, pears and almonds.

New House, 8 rooms, lot 50x12½, town Palo Alto, \$1700. Also some choice building lots in the town.

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## A Clean Sweep.



Where the Sharple's Russian Separator is best known, there it is best liked. Jackson county, in Iowa, is one of the creamery counties of that creamery State. Every separator in the creameries of Jackson county, with two exceptions, was built by P. M. Sharples. The two exceptions are machines that were purchased ten years since. There were some pretty hard fights up in that county between separator manufacturers, but whenever the Russian goes into a contest it wins. The oiling devices of the Russian are simply wonderful. Think of one of these machines running five hours per day and using but two gallons of oil in a year! That is the record of many Russians. Twice as many Russians have been sold in that State during the past two years as of all other creamery separators combined.

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West Chester, Pa.  
Elgin, Ill.  
Rutland, Vt.

## Baker &amp; Hamilton,

Sole Pacific Coast Agents,

SAN FRANCISCO. SACRAMENTO. LOS ANGELES. NEW YORK.

## ALEXANDER &amp; HAMMON,

RIO BONITO NURSERIES, Biggs, Butte Co., Cal.

## DECIDUOUS FRUIT TREES

OUR SPECIALTY.

The most Complete Assortment of General Nursery Stock grown on the Pacific Coast

## 1,000,000 Trees for the Season of 1894-95 in Stock.

Acknowledged everywhere to be equal to the best. Guaranteed to be healthy and free from scale or other pests.

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## Alexander &amp; Hammon,

Biggs, Butte County, Cal.

## Olive Trees for Sale

GEO. H. KUNZ, Sacramento.

|                           |              |
|---------------------------|--------------|
| Mission, 3 years.         | 5 to 6 feet. |
| Mission, 2 years.         | 3 to 4 feet. |
| Manzanillo, 2 years.      | 2 to 3 feet. |
| Nevadillo, 2 and 3 years. | 4 to 6 feet. |
| Piccolino, 2 years.       | 2 to 3 feet. |

## Olive Trees.

ALL KINDS OF NURSERY STOCK. Send for our Book on Olive Culture.

## Howland Bros.,

POMONA, CAL.

**TREES OF GOLD** plum, SPLENDOR prune, Van OEMAN quince—choice of Burbank's 20 Million "new creations." STARK Trees PREPARED everywhere. SAFE ARRIVAL guaranteed. The "great nurseries" save you over HALF. Millions of the best trees 70 years' experience can grow; they "live longer and bear better."—Sec. Morton. STARK, B44, Louisiana, Mo., Rockport, Ill.

## TREE - WASH.

Olive Dip.

"Greenbank" Powdered Caustic Soda and Pure Potash.

T. W. JACKSON & CO.  
Sole Agents. No. 226 Market Street  
SAN FRANCISCO, CAL.

## CALIFORNIA FRUITS

—AND—

## HOW TO GROW THEM.

A Manual of Methods which have Yielded Greatest Success; with Lists of Varieties Best Adapted to the Different Districts of the State.

Practical, Explicit, Comprehensive. Embodying the experience and methods of hundreds of successful growers, and constituting a trustworthy guide by which the inexperienced may successfully produce the fruits for which California is famous. Second edition, revised and enlarged. By EDWARD J. WICKSON, A. M., Assoc. Prof. Horticulture and Entomology, University of California; Horticultural Editor *Pacific Rural Press*, San Francisco; Sec'y California State Horticultural Society; Pres. California State Floral Society, etc.

Large Octavo, 599 pages, fully illustrated, price, \$3.00, postpaid.

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C. L. HASKELL, 10 Bush St., S. F.



### Nearly Six Miles Above the Earth in a Balloon.

A record-breaking voyage made by Dr. A. Berson in the balloon ship "Phoenix" is described in the *Journal of Aeronautics*. The balloon started December 4th from Stuttgart, Germany. It was charged with 2000 meters of hydrogen gas, and amply supplied with instruments for registering wind velocities, temperature and barometric pressures. In a quarter of an hour after the start the balloon had risen to 2000 meters (6500 feet), and in an hour to 5000 meters or 16,000 feet, the thermometer registering 18° C. below zero (0° F.). In less than two hours the bold aeronaut was carried to 26,000 feet, or to an elevation exceeding all mountain summits, with the exception of the loftiest of the Himalayas. The thermometer at this point marked -39° C. (-38° F.), or very nearly the lowest that had been recorded on any mountain top (the winter temperature of the summit of Mount Ararat, as reported by General Venukof). Neither the rarified atmosphere nor the cold seems to have materially interfered with the intellectual processes of the aeronaut, who, however, was forced to a close communion with the oxygen bags. When ceasing for a few seconds to breathe from these bags, Dr. Berson felt dizzy and dangerously weak, but only once dip his eyes close against himself. In two and a half hours after the start the adventurous scientist reached the highest point of his journey, 9150 meters (30,012 feet), an elevation almost exactly 1000 feet above the summit of Mount Everest. At this prodigious height, where the barometer registered an atmospheric pressure of only 231 millimeters, or 9.09 inches, careful readings of the instruments were still made, and the condition of the observer was such that seemingly he might have ascended much farther. The temperature in greatly attenuated atmosphere was -47.9° C. (-54° F.). For a full hour after the "highest" was reached, two of Dr. Berson's fingers remained frozen, but beyond this comparatively little discomfort was experienced. The descent was made in slow calculated curves, with final arrival on a stubblefield at Schoenwald, near Keil. Among the interesting results of this atmospheric exploration were the determination of humidity in the highest zones, the snow-flake structure of cirrus clouds, a tremendous increase of wind velocity with the ascent, and the great lowering of winter temperatures between 5000 and 30,000 feet.

### Popular Electrical Theories.

A history of popular misconceptions on electrical subjects would make entertaining reading. The superintendent of a Kansas electric light station tells that among a thousand puzzling inquiries that were addressed to him on the night that the electric light was started in his city, was the poser: "Where is the hole in the wire that the juice comes through?" An electrical

supply firm in Nova Scotia has lately received the following letter from a Cape Breton correspondent: "Will you kindly let me know all particulars about the incandescent lamps which you advertised in the *Recorder*? That is, what is used in them, is it kerosene oil, etc., or, if not, what is it? And can the material be easily obtained? Also let me know if the light from your lamps is much superior to the ordinary kerosene ones. I am desirous of getting one or more of them, and would like to know all about them." A well known London weekly paper gravely publishes among its bits of electrical information the announcement that: "A German electrician recently hived a swarm of bees by the use of electricity. He passed a powerful current through the bough of a tree on which they clustered and the stock caused them to fall stupefied to the ground. Before they had time to recover he had them collected and placed in a new hive." An inventive genius, who hails from Columbus, O., has discovered that "if two dissimilar conductors of electricity which are subject to slight atomic change under the influence of sound are joined together after the manner of a pair of thermopile bars, and the open ends are insulated by a suitable non-conductor of both sound and electricity a current is generated when sounds are made in the vicinity of the exposed ends. If two or more such elements are connected together we have an acoustic battery, and by increasing the number of elements it is possible to operate an ordinary call bell by simply clapping the hands in front of the exposed ends of the battery." This sounds impressive. The way in which the inventor proposes to turn his inspired idea to account is to establish an electrical perpetual motion and among other things to wind clocks by the noise of their own pendulums and light shops by the noise of the machinery. A contemporary says: "By this scheme also an auctioneer may yet run an electrical cash system with the sound of his own voice; some janitor by the force of his profanity may stave up electricity enough to ring a church bell; policemen in noisy boots could furnish street lights; the mooing cows may furnish power to cut their own fodder; and a barking dog may keep an electric light burning by and by on the lawn."

"IT HAS BEEN DISCOVERED," says the *National Druggist*, "that the famous tree, from the bark of which quinine is obtained, furnishes no quinine except in malarial regions. If a tree is planted in a malarial district, it will produce quinine; if it is planted in a non-malarial district, it will not produce quinine. It is therefore claimed that quinine is a malarial poison, drawn from the soil and stored up by this wonderful tree."

A rustic deacon had to announce that Rev. Hugh Price Hugh, M. A., would preach at the chapel. What he did announce was: "The Rev. Hugh Price Hughes' Ma will preach." He added, with that love of amplification which is habitual in his class, "We hope the old lady will give us a good discourse."—Living Church.

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BUFF LEGHORNS—Eggs from prize winners, \$1.25 and \$3 per thirteen. Incubator lots at reduced rates. C. W. Hansen, San Mateo, Cal.

EGGS FOR HATCHING—Buff, Brown and White Leghorns, Plymouth Rocks, White Wyandottes, Silver Wyandottes, Light Brahmas, Indian Games, Black Spanish, Bantams, Pekin Ducks—Two Dollars setting. Mammoth Bronze Turkey, White Holland Turkey—Three Dollars dozen. Theodore Cushing, Spokane, Washington.

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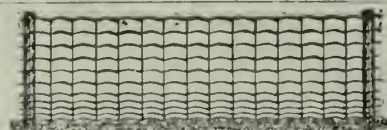
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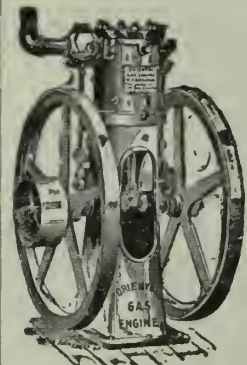
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Scientific Food Preparation.

The United States Department of Agriculture could not have been in better business than it was when it caused to be prepared and circulated a bulletin on the subject of food preparation. Our enthusiastic poet statistician, Edward Atkinson, in this bulletin skips joyously to the fore with his Aladdin oven and his oil lamp heater and cooker, enabling a poor man to prepare a dinner fit for the gods at an outlay of a few cents. Atkinson's part of the work shows what every cook who has any sense already knew—that in order to get the best results most kinds of food must be subjected to a moderate heat a very long time instead of a fierce shriveling heat for a short time. But very few cooks have any sense in this respect. The pamphlet contains illustrations of cooking tables and boxes that prepare delicious food with the heat only of a little kerosene lamp.

Mrs. Ellen H. Richards furnishes to the pamphlet what, if one were speaking of live-stock feeding, he would call a "balanced ration." And, indeed, no living creature needs a balanced ration more than civilized man does all over the world to-day.

The proper food to keep a human being in health must contain so much carbohydrates or starchy matter. We all knew that before, but the trouble was with the scientific that in their eagerness to lug in this and other fine big words they never told us in what foods we could find our carbohydrates. This Mrs. Richards does. Heat is wanted, and for this purpose fats and oils are necessary. Muscle-building food is wanted too. The food for this purpose contains much "protein," which is the name given to the muscle-building nitrogenous compounds.

Mrs. Richards gives the "balanced ration," which, in the latest scientific view, furnishes all these substances to one person for a week. Her table is as follows, not counting drinks, such as milk, cocoa, coffee, etc.:

|                                 | As bought, pounds. | Nitrogenous substances, pounds. | Fats, pounds. | Carbohydrates, pounds. |
|---------------------------------|--------------------|---------------------------------|---------------|------------------------|
| Meat or meat substitutes.       | 3                  | .40                             | .20           |                        |
| Flour and grains.....           | 5                  | .60                             | .05           | 3 50                   |
| Butter.....                     | 0.8                |                                 | .70           |                        |
| Sugar.....                      | 1                  |                                 |               | .90                    |
| Vegetables, including potatoes. | 5                  | .06                             | .12           | .60                    |
| Fruits.....                     | 3                  | .01                             |               | .20                    |
| Total.....                      | 17.8               | 1.07                            | 1.07          | 5 20                   |

The dish that comes nearest to being wholly digested is one made of cornmeal and cheese cooked together. Ninety-three per cent of it is digested. In a dish made up of pea flour cooked with milk, butter and eggs 92 per cent is digested.

The celebrated Dr. Dumoulin, being surrounded in his last moments by many of his fellow-physicians, who deplored their loss, said to them: "Gentlemen, I leave behind me three great physicians." Every one of them, thinking himself to be one of the three, pressed him to name them, upon which he replied, "Cleanliness, exercise, and moderation in eating."—Sacred Heart Review.

A good baby story is of a neighbor meeting a little one on the street, and saying: "Good morning, my little dear. I never can tell you and your sister apart. Which of the twins are you?" And the little dear made answer, "I'm the one what's out walkin'."—The Transcript.

There is more Catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease, and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven Catarrh to be a constitutional disease and therefore requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from ten drops to a teaspoonful. It acts directly on the blood and mucous surfaces of the system. They offer one hundred dollars for any cure. Send for circulars and testimonial dress. F. J. CHENEY & CO., Sold by Druggists, 75c.

Acute Dyspepsia.

SYMPATHETIC HEART DISEASE OFTEN ATTENDS IT.

The Modern Treatment Consists in Removing the Cause.

[From the Republican, Cedar Rapids, Iowa.]

Mrs. V. Curley, who has resided in Clarence, Iowa, for the past twenty-two years, tells an interesting story of what she considers rescue from premature death. At all events, relief from a life of great suffering, which made death seem a happy means of escaping from torture. Her narrative is as follows:

"For ten years prior to 1894, I was a constant sufferer from acute stomach trouble. I had all the manifold symptoms of acute dyspepsia, and at times other troubles were present in complication. I did not know what it was to enjoy a meal. No matter how careful I might be as to the quality, quantity and preparation of my food, distress always followed eating. I was despondent and blue. Almost to the point of insanity at times, and would have been glad to die. Often and often I could not sleep. Sympathetic heart trouble set in and time and again I was obliged to call a doctor in the night to relieve the sudden attacks of suffocation which would come on without a moment's warning.

"My troubles increased as time wore on and I spent large sums in doctor bills, being compelled to have medical attendants almost constantly. During 1892 and 1893, it was impossible for me to retain food and water brashes plagued me. I was reduced to a skeleton. A consultation of physicians was unable to determine just what did ail me. The doctors gave us as their opinion that the probable trouble was ulceration of the coats of the stomach and held out no hope of recovery. One doctor said, 'All I can do to relieve your suffering is by the use of opium.'

"About this time a friend of mine, Mrs. Symantha Smith, of Glidden, Iowa, told me about the case of Mrs. Thurston, of Oxford Junction, Iowa. This lady said she had been afflicted much the same as I had. She had consulted local physicians without relief, and had gone to Davenport for treatment without receiving any benefit therefrom. Giving up all hope of recovery, she was ready for any suggestion, and was persuaded by a friend to take Dr. Williams' Pink Pills. The result was almost magical.

"In despair I bought a box of the pills from our druggist, Mr. Geo. Smith. By the time the first box was finished I was able to eat with less distress but was in no mood to go on with the treatment. I presume I expected too much, but my husband thought I was better, and insisted upon my trying at least one more box. It was fortunate for me that they did not let me give up. I kept on with the pills and before many months I felt better than I had for a dozen years. I am now almost free from trouble, and if through some error of diet I feel badly, this splendid remedy sets me right again. I have regained my strength and am once more in my usual flesh. I sleep well and can eat without distress. I have no doubt that I owe my recovery to Dr. Williams' Pink Pills. I only wish that I had heard of them years ago, thereby saving myself ten years of suffering and money."

Dr. Williams' Pink Pills for Pale People are not a patent medicine in the sense in which that term is usually understood, but are a scientific preparation successfully used in general practice for many years before being offered to the public generally. They contain in a condensed form all the elements necessary to give new life and richness to the blood, and restore shattered nerves. They are an unfailing specific for such diseases as locomotor ataxia, partial paralysis, St. Vitus' dance, sciatica, neuralgia, rheumatism, nervous headache, the after effects of the grippe, palpitation of the heart, pale and sallow complexions, that tired feeling resulting from nervous prostration; all diseases resulting from vitiated humors in the blood, such as scrofula, chronic erysipelas, etc. They are also a specific for troubles peculiar to females, such as suppressions, irregularities, and all forms of weakness. They build up the blood and restore the glow of health to pale or sallow cheeks. In men they effect a radical cure in all cases arising from mental worry, overwork, or excesses of whatever nature.

These pills are manufactured by the Dr. Williams' Medicine Company, Schenectady, N. Y., and are sold only in boxes bearing the firm's trade mark and wrapper, at 50 cents a box or six boxes for \$2.50, and are never sold in bulk. They may be had of all druggists or direct by mail from Dr. Williams' Medicine Company.



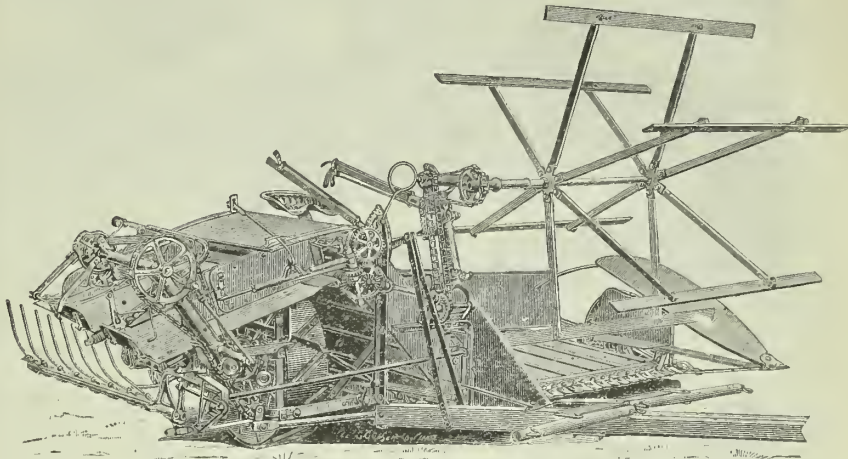
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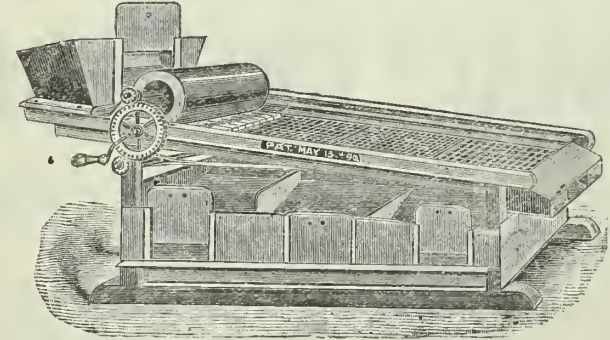
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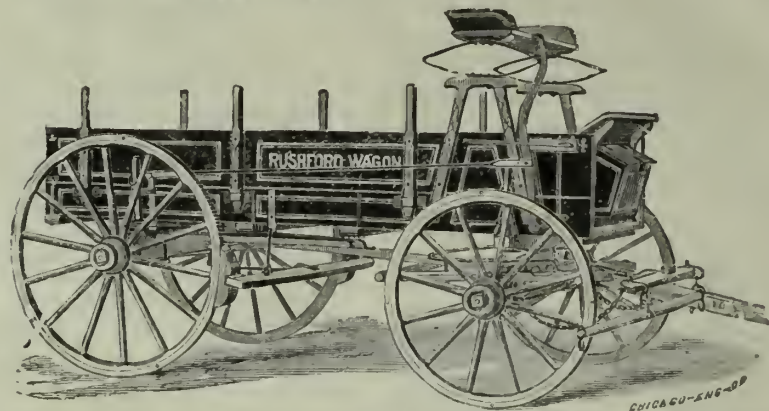


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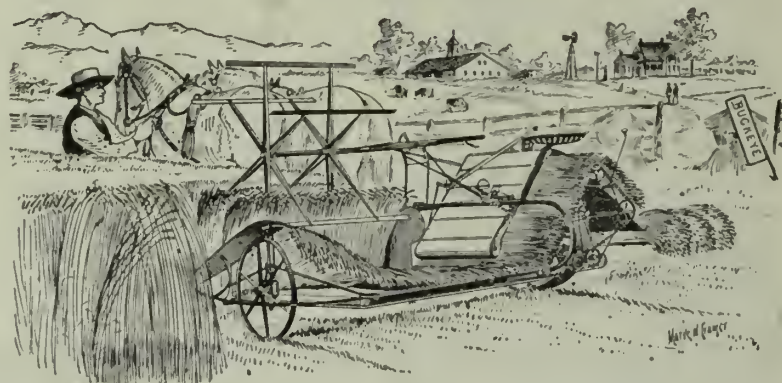


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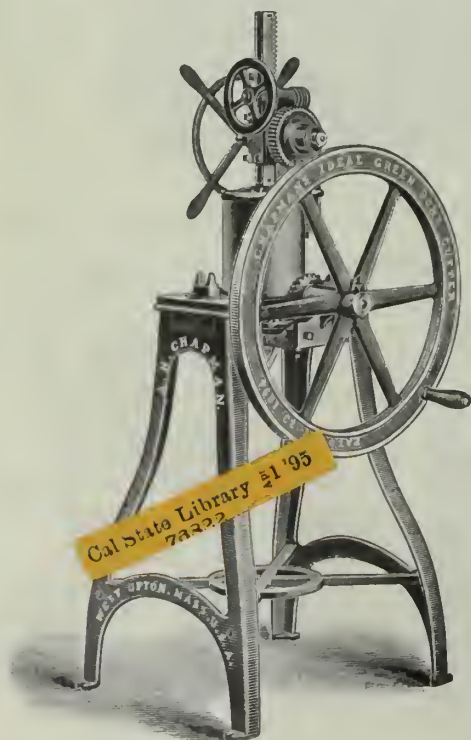


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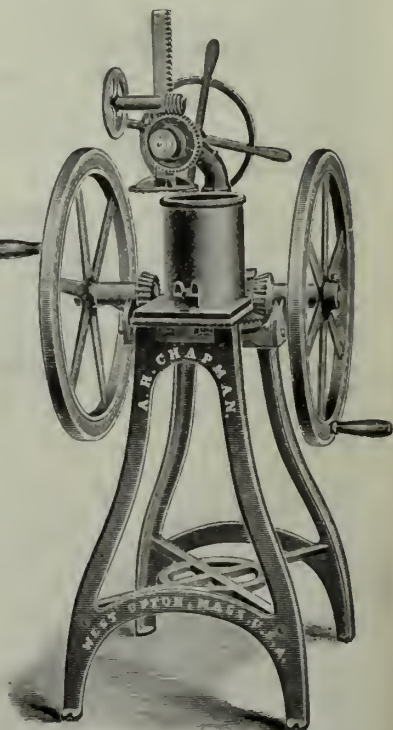
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Vol. XLIX. No. 25.

SAN FRANCISCO, SATURDAY, JUNE 22, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

## Our Stone Crop.

Farmers are expected to produce bread and not stone, and yet there are some owners of hill lands near the bay of San Francisco who make more from their crop of paving blocks than they can from any softer material. The subject of stone has, however, always had an agricultural significance, and the stone crop on New England farms is never affected either from winter frost or summer blight. In California, as a rule, field stones are not burdensome, though we have seen some fields which would put Massachusetts to shame with cobble covers.

California quarries, yielding granite, marble and other rock of architectural value, are quite an item of our local resources. They are also attractive topics for illustration, as the engravings on this page show. The view in the Rocky Point granite quarry is especially interesting because of its showing of Indian picturing on the rock which is now being worked to minister to the progress of another race and another age. This quarry is situated near Exeter, Tulare county, and is of syenitic granite—a notable quarry.

The other engraving shows a general view of one of the largest granite quarries in the world, located about three miles southeast of Raymond, Madera county. It yields a light gray granite of even texture, which lies so as to admit of separation into immense blocks. One is described about two years ago as having the entire force of 70 men then at work on it; it was 325 feet long, five to fifteen feet in thickness, and exposed for fifty feet in width, without seam or flaw.

Granite rock occurs in nearly every county of the State and is one of our most abundant building materials. There are almost as many varieties as localities where found, the general term "granite" being applied to many masses of rock that strict mineralogical classification would place differently.

In many parts of the State railroad facilities have made possible the opening of granite quarries, the commercial value in several instances being considerable. In Placer county, at Rocklin, Griffith, Gould



ROCKY POINT GRANITE QUARRY, TULARE COUNTY, SHOWING INDIAN PAINTINGS AND EFFECT OF A BLAST.

& Towles, and Penryn, are large quarries constantly worked, and from that locality has come much of the granite in use in this city. At the Griffith quarries, near Penryn, is opened up what is said to be the only true black granite quarry in the State. Extensive polishing works form a part of the quarrying plant at this point. The State Prison granite quarry at Folsom, Sacramento Co., also furnishes a large amount of granite. Considerable granite quarrying is also being done in the southern part of the State.

MANY of the older readers of the RURAL will be shocked to know of the death of R. S. Carey of Sacramento by his own hand. He had met financial reverses and was in bad health and life seemed too heavy a burden. He committed suicide by shooting. Many years ago Mr. Carey owned thousands of acres of land in this State, and was one of the largest stock-raisers. He was known all over the State, and was at one time president of the State Agricultural Society, in which he always took an active interest, and whose advancement he forwarded by

every means in his power. At one time he was president of the Capital Savings Bank and made it one of the most solid institutions in the country. The deceased was a native of Missouri and 67 years old.

At the State University experiment grounds can now be seen a large tobacco planting, embracing about thirty varieties from different parts of the world. For the next two months it will be a sight worth seeking by all who have interest in this crop. This fact is the more pertinent because the Manufacturers' Association's committee on new industries reported on the feasibility of raising tobacco in this State, and that it could be profitably and successfully cultivated. Accompanying the report were written opinions from several tobacco manufacturers to the effect that the samples of tobacco grown in California which they had examined could not be surpassed in quality.



RAYMOND GRANITE QUARRY, MADERA COUNTY, CAL.



# PACIFIC RURAL PRESS.

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ALFRED HOLMAN.....Editor.  
E. J. WICKSON.....Special Contributor.

San Francisco, June 22, 1895.

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## The Week.

Good Times. Those two great "friends of the farmer," Henry Clews, the New York banker, and Philip D.

Armour, the Chicago packer, agree that there are good times coming. "It is to be a great year for the farmer," says Philip D. Armour, "and ultimately for that reason a great year for the merchant. High prices are going to more than compensate for any loss in wheat, and the country is going to get the benefit in a moderate way of rather light crops abroad. There were never such prospects for the Northwest." And Henry Clews, says he: "The aspect of affairs in Europe is becoming steadily more assuring. The revival of business which has set in on this side of the Atlantic has its counterpart among the commercial nations on the other side. It is very clear from the eagerness with which new issues are taken in England, Germany and Holland, as well as on this market, that during the last five years of business reaction a vast amount of capital has been held back from investment until the times looked more propitious. The readiness with which new investments are now taken is plain evidence of a broad and positive revival of credit. Reinforced as that revival will be by the most advanced methods of production this coming ten years may be expected to surpass everything in the world's experience in the way of industrial progress and commercial expansion. This is something worth living for."

Fruit Selling. The State Horticultural Society will follow at its June meeting the lead so successfully entered upon

at the May meeting in Yuba City. The great problem which now presses upon the fruit industry is to sell well, and to sell well it is just as important to put the product into the best marketable shape as to make direct efforts to find customers. In fact, perhaps the most direct avenue to sale lies through an attractive, marketable product. The June meeting of the Society will be held in the rooms of the State Board of Horticulture, 220 Sutter St., S. F., on Friday, June 28th, at 1 o'clock p. m. The main line of thought will be the best handling of dried fruits. Col. Philo Hersey, who is so well known as a leader in the Santa Clara County Fruit Exchange, will address the Society upon the propriety and importance of properly grading fruits for the market, along the line of what experience and necessity have taught him. Mr. F. M. Richter, of the Campbell Fruit Association, has been invited to present his views, in the form of suggestions, on handling the dried-fruit product. Mr. A. W. Porter, of Porter Brothers & Co. of S. F., will have a paper on the outlook for dried fruit in 1895. These addresses by those who

are so well informed should attract a wide attendance of producers, and the discussion in which all are invited to participate should bring out much which will be exceedingly valuable no hear.

Chicago

Auctions.

It looks as though the open fruit auctions at Chicago, which the California Fruit Growers' and Shippers' Association is contending for, would prevail. It is telegraphed that the small dealers propose to stand for their rights as purchasers, and they declare that the work of the "Buyers' Association" is merely a move to form a trust and keep the prices of fruit high to consumers. They assert that the same thing has been tried several times within the last five years, but always without the desired result. It is not believed that the Fruit Buyers' Association will carry out its threats to boycott the auction, as the grocers would have to be supplied in some way, and it would be poor policy to offend them, as it is thought they will take a neutral stand. It was learned that at a meeting of the Association held Saturday it was proposed to send a representative to California to treat with the growers, and, if possible, to have them abolish the present auction and find some method of relief for the dealers, but no final action was taken. There does not seem to be any ground for negotiations. The California interest is to sell as much fruit as possible, and to have the competition in local selling such that consumers can afford to take a great deal of it. High retailing to consumers is diametrically opposed to the California interest.

Pure

Pork.

When one remembers that for two or three hundred years the microscope was little more than an expensive toy, and for the last fifty years has been a means of most advanced scientific research, the extent of its present employment as an industrial tool is exceedingly interesting. In nearly all arts and manufacture the lenses play a very important part, but in none perhaps is such an aggregate amount of work done as in the live-stock branch of agricultural production. A statement prepared at the Department of Agriculture shows that the total amount of microscopically inspected pork shipped from the United States to Europe during the three months ending with January, 1895, was 13,400,615 pounds—a gain over the shipments of the corresponding period of 1893 and 1894 of about 3,200,000 pounds. The government microscopists have been quite as quick in their way as the pig-killers in their operations. What a shock it would be to the sensibilities of the microscopists of the last generation to think of their favorite instrument as the leading power in the work of the pork butchers!

Farmers'

Institutes.

The greatest "gang" of Farmers' Institutes ever held in California will begin at San Diego bright and early on Monday morning, July 8th, and continue through that day and the next in the Chamber of Commerce rooms in that city. The next Institute will be held at Escondido on Wednesday and Thursday, July 10th and 11th, and the last at Santa Ana on Friday and Saturday, July 12th and 13th. This makes six solid days of institute work in places adjacent, so that the University representatives who hold the meetings may go continuously through the week. Prof. Wickson, of Berkeley, and Prof. Cooke, of Claremont, will do the work on the part of the University, and there have been prepared for all of the meetings most attractive programmes, in which local speakers who are practically successful in the lines they follow will expound the principles which actuate them and the methods their experience has approved. Nearly all branches of rural work and life will be touched upon. It will be a grand opportunity to take a "short course" in southern California agriculture, which we hope will commend itself to all our readers in that part of the State. Each meeting will consist of four or five sessions, and among the features of interest, outside of the literary exercises, music, etc., will be visits to places of interest to farmers which will yield object lessons of much value.

## Sorghum and Egyptian Corn.

TO THE EDITOR:—I have secured enough barley hay from 12½ acres to last my two or three work horses for about three years, so I do not wish to sow any more of that next winter. What crop would you advise either to be sold when gathered or fed to my hogs, of which I have about 130. Potatoes and sorghum are suggested.  
Bakersfield.  
P. C. M. GRANT.

If you wish to proceed on a hog basis, and the land is suited for it, we would put the land down in alfalfa. If not, you can do very well indeed with Early Amber cane, to be fed green, and Egyptian corn, to be allowed to mature and furnish grain to finish up the hogs. If you have moist land or water you can hurry in a sorghum crop at once and still get good results before winter. You can probably grow a winter crop of potatoes followed by sorghum or Egyptian corn. In your climate, if you have moisture enough, you can double the crop with quite a range of things. Look around and see what your most enterprising neighbors succeed with.

## From an Independent Standpoint.

That the talk about better times is not all talk appears very clear from a little study of the trade journals. For example, the last *Bradstreet's*, reviewing the industrial events of the country for a single week, reports the following resumptions of work after long periods of idleness: Conshohocken, Pa., steel works, employing 300 men; Pittsburg, Pa., puddlers, number of men not stated; Shenandoah, Pa., coal mines, 1000 men; Pittsburg, Pa., coal mines, 10,000 men. The list of large establishments which advanced wages during the same week is as follows: Calumet, Mich., copper miners, 10 per cent, 3500 men; Braddock, Pa., wire-workers, 10 per cent; Youngstown, O., steel-workers, 10 per cent, 1000 men; Somerville, N. J., woolen mills, 10 per cent, 1000 men; Brooklyn, N. Y., elevated railroad employes, 10 per cent, 1000 men; Chicago, Ill., steel works, 10 per cent, 2000 men; Middletown, Pa., iron works, 10 per cent, 1000 men; Chester, Pa., tube works, 10 per cent, 500 men; Lockport, Pa., wire nail works, 10 per cent; Joliet, Ill., nail works; St. Louis, Mo., nail works; Allentown, Pa., nail works; Rankin, Pa., nail mill, 10 per cent, 600 men. The journal (*Bradstreet's*) from which we glean these facts, in its editorial page, declares that the tendency of prices is again upward, notably so for steel and iron, which are in better demand, despite higher prices, as are cereals and cotton and leather and shoes, which, with some other staples—in all sixteen—close higher on the week.

There can be no mistaking the significance of these facts. They not only show an improvement in the times, but an improvement resting on the sound basis of better values. From one cause or another, the advances are slow in reaching California, but they are surely coming. Already wheat, wine, wool, beef, horses and some other commodities are a little higher than six months ago. In the manufacturing and business field there is distinctly more activity. That our people are in good temper is clearly manifest in the popular passion for fiestas, carnivals and general sports.

The daily newspapers of Tuesday morning contained a rather unusual bit of news from Morse, Wisconsin, to the effect that a syndicate of Boston capitalists had bought the town—literally bought it bag and baggage with every dwelling house and business house, the gas and water works and all mercantile interests, and a vast area of land surrounding it. The price paid was in the neighborhood of \$6,000,000. The number of persons living in Morse is about 5000, and the whole working population is in the employ of a lumber and tanning company. The purchasers, who propose to continue these industries on an expanded scale, are arranging to run the town on much the same plan as the town of Pullman, near Chicago, where the Pullman Car Co. owns everything, not only the dwellings and stores but even the streets, parks, a theater and several churches.

At first glance this sort of thing seems not only practicable but attractive. It stands to reason that a rich company, operating a town on a business basis, will bring to its service the best architectural and engineering skill; that its dwellings will be of a very superior sort; that the sanitation of its property will be systematic and that wholesome rules of local discipline will be provided and enforced. And, indeed, these things are—at least in Pullman and in two other towns similarly owned and administered—well looked after. The visitor is invariably impressed with the rows of pretty houses and their uniform neatness, with the well-kept streets and the general orderliness of things; and, charmed by the picture, he is likely to forget that in the life of communities there are considerations of far higher importance than creature comfort or even of social order.

In the ordinary American village life, the head of each family is a householder; and as a householder and taxpayer he has a direct personal interest in town affairs. The laying out or the improvement of streets, the creation of water and lighting systems, the planting of shade trees—these and a multitude of similar local details—are matters of interest to him; and respecting them his opinions are more or less influential. Village life under such a system, no



matter how trivial its interests, is the best possible school of citizenship. It acts directly upon the intelligence, the judgment and the spirit of every man and through him upon the members of his family. Boys and girls, growing up under such conditions, imbibe lessons which assist insensibly in training their minds to a habit of independent and responsible judgment. It was this sort of community life, with its local forum the town meeting, which made the New England of a century ago the very cradle of liberty, and through which were developed the ideas upon which our Government rests.

Now, the Pullman scheme—which it is proposed to repeat in Wisconsin—is precisely the reverse of all this. Its fundamental condition denies to anybody the privilege of owning his own home. Since all the affairs of the community are regulated by proprietary interest, there can be no such thing as citizenship in it. The utmost influence which any resident of such a town may exert is to appeal to the "company's office." While nominally a householder, he is simply the occupier of the property of another under conditions which forbid anything like the exercise of personal taste or judgment in its administration. It is not surprising that Americans reject real advantages when they must be secured at the cost of personal independence. Who, indeed, with the spirit of a man in him would not prefer less art, less comfort and even less wholesomeness to all the attractions of a "Company town" under limitations which deny him nearly all the privileges of local citizenship? It is creditable to the spirit of American workmen that systems like that of Pullman instinctively repel them and that all such settlements must constantly be recruited by importations of foreign workmen. The time, we trust, will never come when Americans will consent to eat, sleep, worship, play and perform the varied offices of community and domestic life at the tap of some autocrat's bell in a "Company office." We hope sincerely that the proprietary scheme at Morse will fail as it has practically failed at Pullman, and we trust the time may never come when American citizens will be found in considerable numbers willing to submit to such conditions.

In a contribution to the *North American Review* for June Senor Romero, the Mexican Minister at Washington, tells how the silver standard works in his country. He sums up its advantages as follows: (1) It encourages the export of domestic products because the expenses of producing them—wages, rents, taxes, etc.—are paid in silver, and therefore their cost as compared with their market value is considerably less than that of similar articles produced in gold standard countries. (2) The silver standard is a great stimulant in developing home manufactures, because foreign commodities have to be paid for in gold, and, owing to the high price of exchange, their price becomes so high that it pays well to manufacture some of them at home, low wages also helping to bring about these results. (3) While the fall of silver with free coinage in Mexico has not given the Mexican silver coins, when converted into foreign exchange or sold for gold, any value other than that of the silver bullion contained in them, nevertheless the purchasing power of the silver dollar is now, on the whole, as great in Mexico as it ever was. (4) The fact that foreign commodities have to be paid for in gold makes them so high that it operates as a protective duty against them. (5) The fact that every gold dollar is converted into two silver dollars, when sent to Mexico, encourages the investment in Mexico of foreign capital from the rich countries which have the gold standard. (6) The low price of silver abroad makes it unprofitable to export it, and its value at home makes it useful in all industries. Instead of sending out silver as formerly, Mexico now sends agricultural products to pay for her imports, keeping her silver at home and thus increasing her circulation, so that there is now an ample supply of money in the banks. (7) Formerly many Mexicans having fixed incomes preferred to live in Europe and spend their money there; but the higher rate of exchange has reduced their incomes so materially that a great many of them have returned home and now spend their incomes in Mexico.

Senor Romero thus sums up the disadvantages of

the silver standard as applied to Mexico: (1) Imported commodities are so high as to be beyond the reach of all but the rich. (2) The constant fluctuation in the price of silver contributes to reduce importations of foreign commodities because it makes uncertain the value of these commodities when the time for payment arrives. (3) The reduction of imports of course diminishes the import duties, which, until very recently, were in Mexico the largest source of federal revenue. (4) The national expenses are considerably increased by the payment in gold of the interest of the national debt held abroad and other expenses such as salaries of diplomatic and consular officers. (5) To meet the reduction in import duties and the increased expenses of gold obligations there has had to be an increase in the burdens of direct taxation. (6) The railroads are heavy sufferers since they collect their freights in silver but pay in gold the interest on their securities and for foreign articles needed for their roads. (7) The transportation of foreign commodities by railroads is greatly reduced, while the local traffic—though greatly increased—does not compensate for the loss. (8) The living expenses of the middle and rich classes who use foreign commodities have been increased.

Summing up the effects produced in Mexico by the silver standard, Senor Romero says:

I can say, with perfect correctness, that while it is a drawback and an inconvenience to have our currency depreciated when we have to use it abroad, either to pay for foreign merchandise or for the interest of our gold obligations, and while that depreciation increases our burdens to some extent, because our gold obligations and the price of foreign commodities are nearly duplicated, the advantages we derive from the use of silver money in all our transactions are so great, that I think they fully compensate if they do not overcome its disadvantages. Notwithstanding all this we would like to see silver commanding the same price as before it was demonetized in 1873, and we think that the world has to come back sooner or later to bimetalism, as the only way to have a common and more stable level of values and to avoid most of the financial trouble which the commercial nations of the world are now so keenly suffering.

#### Rainfall and Temperature.

The following data for the week ending 5 A. M., June 19, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA<br>STATIONS. | Total Rainfall for the<br>Week. .... | Total Seasonal Rain-<br>fall to Date. | Total Seasonal Rain-<br>fall Last Year to<br>Same Date. .... | Average Seasonal Rain-<br>fall to Date. | Maximum Temperature<br>for the Week. .... | Minimum Temperature<br>for the Week. |
|-------------------------|--------------------------------------|---------------------------------------|--------------------------------------------------------------|-----------------------------------------|-------------------------------------------|--------------------------------------|
| Eureka.....             |                                      | 46 31                                 | 55 15                                                        | 43.93                                   | 58                                        | 42                                   |
| Red Bluff. . . . .      |                                      | 28 47                                 | 22.16                                                        | 25.38                                   | 96                                        | 52                                   |
| Sacramento.....         |                                      | 24 11                                 | 16 35                                                        | 21.97                                   | 92                                        | 52                                   |
| San Francisco . . . . . |                                      | 25 70                                 | 18 47                                                        | 24 30                                   | 96                                        | 48                                   |
| Fresno . . . . .        | ....                                 | 14 15                                 | 8.53                                                         | 10 96                                   | 100                                       | 48                                   |
| Los Angeles. . . . .    | 01                                   | 15.93                                 | 6.73                                                         | 20 63                                   | 88                                        | 50                                   |
| San Diego. ....         |                                      | 11 61                                 | 4 19                                                         | 10 95                                   | 74                                        | 54                                   |
| Yuma . . . . .          |                                      | 2.97                                  | 2.16                                                         | 3.56                                    | 104                                       | 62                                   |

#### Weather and Crops.

Report for the Week by the Director of the State Weather Service.

Director Barwick of the Weekly Weather and Crop Service summarizes as follows:

The average temperature for the week ending Monday, June 17th, was for Eureka 50°, Independence 70°, Los Angeles 61°, Red Bluff 74°, Sacramento 69°, San Francisco 56°, San Luis Obispo and San Diego 62°.

As compared with the normal temperatures a heat deficiency is shown, as follows: Eureka 6°, Fresno 1°, Los Angeles 4°, San Francisco 4°, San Diego 3°, while Red Bluff and Sacramento show that normal temperatures have prevailed.

The weather condition therefore throughout the State has been one favorable to all summer crops. Grain-haying is about completed, and a fine crop of oat, barley and wheat hay has been secured. Alfalfa hay is being cut again for the third and fourth crop, and will continue to be mowed for several months yet.

The grain harvest has begun generally in the Sacramento and San Joaquin valleys, and the reports show the condition to range from very poor to very good.

The high north winds have injured the riper grain by shelling it out of the head, while the dryness of the wind has shrunk the late-sown grain. The

crop throughout the State will not be a State average.

Fruit has been damaged by being blown from the trees.

The army worms and grasshoppers have made their appearance in numerous places and the damage done has been variable, some parts reporting everything green eaten up, while others report no injury to amount to anything has occurred.

The weather in the mountain counties of the extreme northern portion of the State still reports occasional freezing weather at nights.

TEHAMA (Red Bluff)—The damage done to all crops by the "norther" of last week is greater than at first thought. A great amount of fruit was knocked off the trees. (Corning)—The winds have done considerable damage by shelling out ripe grain and withering vegetation of all kinds.

BUTTE (Durham)—All grain has been more or less injured by the north winds which have prevailed with short intervals for two weeks.

GLENN (Willows)—The cool weather is reviving the late-sown grain that was damaged by the north wind.

SUTTER (Yuba City)—The north wind and warm weather has rapidly ripened the grain, and has also shelled out much of the grain that was ripe.

COLUSA (Colusa)—The north wind did not do as much damage as the farmers first thought. The tule farmers are sowing Egyptian corn.

YUBA (Marysville)—Weather favorable for grain and fruit, and no damage with many has occurred, though the north wind, which has been cool, had but small damaging qualities that it usually has. Barley is being cut in early localities, and by the middle of next week harvesting will be general. (Wheatland)—Bear River hops are growing rapidly. The six days of north wind last week caused many vines to leave the strings. Grain is reported shrunk by the north winds of last week, and it also caused much young fruit to drop. No damage from grasshoppers.

SACRAMENTO (Sacramento)—With the exception of a little north wind the weather has been all that could be desired. All crops are doing well. Fruit shipments are on the increase, but will not be in full blast for several weeks to come. Pears are fully two weeks later than usual; peaches are coming in quite freely. Hops are doing well.

YOLO (Woodland)—The north wind has done immense damage to grain and fruit. In many cases what were promising fields of wheat and barley will not be cut, while the pear crop in many orchards is entirely destroyed. The tule lands have, in a measure, escaped, on account of the straw being shorter and the wind having less effect; but in the higher and more fertile fields the destruction is unprecedented, the ripe grain being shattered out, while the more backward fields will be pinched.

NAPA (Napa)—The grape crop will be short this season, especially the Gray Reisling owing to the long spell of cool weather.

SONOMA (Santa Rosa)—Vines have made an exceedingly vigorous growth, but the grapes are not well set. This is especially the case with the Zinfandel, the principal wine grape of Sonoma County. The Berger and other white grapes are doing better, but inquiry develops the fact that this is an off year for grapes. In reference to fruits, apples may turn out an average crop, but all other kinds will fall short.

SAN JOAQUIN (Tracy)—The West Side will harvest the largest crop ever raised in this section: ranchers are threshing now and the crop is even larger than was expected. (Woodbridge)—Grain here is in pretty good condition and a fair crop will be harvested. Around Lodi the cutworm has been doing great damage to the watermelon crop, and the grain crop is not very promising.

STANISLAUS (Modesto)—All crops are good, and there are no indications of damage by fruit pests.

MERCED (Livingston)—The high winds have done considerable damage to the rye crop by blowing it out. Grain is not turning out as well as expected.

KERN (Bakersfield)—It is estimated that the first crop of hay for this county is fully 70,000 tons. The second crop of alfalfa is nearly ready to cut. Grain harvest is well under way, with a large crop of superior quality. Highest and lowest temperatures, 102° and 57°.

SANTA BARBARA (Santa Maria)—Crops not as good as expected. Rust has very much affected wheat, oats, etc., though barley is good. Apricots half a crop; pears and prunes light. Weather favorable to beans and all summer crops.

VENTURA (Saticoy)—Latter part of week foggy, which is beneficial to beans and corn. Prospects are good for a full crop of both. Pears, prunes and apples will be a fair crop; apricots about one-third of an average crop. (Ventura)—Continued favorable weather for growing crops. Apricots growing finely and will be of the best quality.

LOS ANGELES (Los Angeles)—Clear days and foggy mornings prevailed, with a drizzling rain on the 14th. The cool, damp mornings were beneficial to grasses and root crops, but tended to retard the maturing of fruits. Highest and lowest temperatures, 74° and 51°, with .01 of an inch of rain.

SAN BERNARDINO (Redlands)—The grain throughout the valley is proving very satisfactory, though much damage has been done by smut to the fields skirting Mount Russell. Barley hay is yielding well. The prospects for a heavy fruit crop in all parts of the valley are excellent. The army worm has disappeared. All the conditions have been favorable to the development of apricots, plums, prunes and peaches. The raisin crop is also promising well.

RIVERSIDE (Arlington Heights)—Apricots are a fair crop in this section, and will be ready for market in about a week. Peaches are a heavy crop.

SAN DIEGO (Fallbrook)—Apricots and early peaches are ripening; the crop is fair, but not as good as usual. Haying is finished and harvesting is well under way. The grain crop will be very large.

MENDOCINO (Ukiah)—Grasshoppers are reported in vast numbers in the southern part of the county.

SAN BENITO (Hollister)—Hay in some localities has been slightly damaged by rust, but in general the crop is large and of fair quality. The prospects for a grain and fruit crop is still flattering.

SHASTA (Shasta)—High winds have had a drying influence. Peaches and apricots have ripened fast. Apples and grapes are doing nicely, haying well advanced, potatoes in good shape and stock of all kinds doing well.

PLACER (Newcastle)—Weather fine for work, but somewhat cool, which delays peaches from ripening, although several carloads have been shipped from this place. The prospects are good for fruits of all kind. (Rocklin)—Good weather for fruit, and there are no grasshoppers here in this vicinity.

ALL of the machinery and most of the trays of the Pajaro Valley Fruit Drier have been moved from Gilroy to the McCarty farm, in Carlton district.

THE Los Angeles Herald says that "the orange and lemon crop of the State has thus far sold thirty per cent higher than in five years."

THE Chico cannery is preparing to start up. It will employ 150 persons during the fruit season.



## HORTICULTURE.

## Cross-Pollination Not Always Desirable.

The influence of cross-pollination is just now one of the most interesting in our horticulture. Our readers will remember the papers we have presented in our columns in which distinguished experts have shown by careful experimentation that in some cases fruit is caused to "set" and mature by the application of pollen from some other variety to its pistil. It has also been shown that some varieties of fruit do not require this and it now appears that in some fruits it is not even desirable that the blossom should be sexually fertilized at all. At the last meeting of the Southern California Pomological Society, Prof. A. J. Cook read a paper on this subject from which we take the following:

In my experiments in pollination of the navel orange last season, I found that cross-pollination was not necessary to the production of fruit. Indeed as much fruit was secured where the blossoms were closely covered by paper sacks all through the period of bloom as where they were left fully exposed to visits from bees. Emasculated blossoms were brushed with a slight camel's hair brush, which had previously swept over anthers of navels, and others brushed by one which had swept the yellow anthers of seedlings or Mediterranean Sweets. These blossoms were kept covered, yet the cross-pollinated blossoms were no more productive than the others. I supposed then that these blossoms were self-pollinated.

As soon as the navel blossoms commenced opening this spring I emasculated many blossoms, that is I removed the anthers and often the stigma as well, before the flower opened naturally, taking great pains not to injure the ovary. All untreated blossoms were removed, and the blossoms closely covered with paper sacks so closely tied as to keep all insects away. While it is too early to speak with absolute positiveness, yet I have oranges as large as the end of my thumb, from both the emasculated flowers and from the flowers which had both the anthers and stigma removed. I have little doubt that these will mature if no accident befall them. I think this experiment requires great care, as this year and last the great proportion of the emasculated blossoms blighted and fell off; many more than of those simply covered without emasculation, although, as I am now fully persuaded, both were entirely non-pollinated.

Since making these investigations, I have learned from Prof. Bailey that seedless cucumbers are produced without pollen. Prof. L. H. Bailey (bulletin 31. Horticultural Division Cornell University Agricultural Experiment Station, September, 1891, p. 134) also writes: "There is a question, however, if pollination is advisable in the house, for it is *certain* that the English cucumber will grow to perfection without seeds and entirely without the aid of pollen." Prof. Bailey quotes to the same effect from "Kitchen and Market Gardening," p. 150, London, 1887, and Nicholson's "Dictionary of Gardening," vol. 1, p. 405.

Prof. Munson has secured seedless egg-plants without pollen, while I have learned still more recently from the Florida Horticultural Report of 1894 that Prof. H. J. Webber has proved the same true of the navel orange. He states: "In my experiments I opened a number of navel flowers last spring and summer (1893) before the pollen or pistil had matured, emasculated them, that is cut off the stamens, and immediately drew over flowers thus treated paper or cloth bags, and tied them round the branch below the flowers so that all insects were excluded. A number of flowers thus treated matured fruits which were to all appearances perfectly normal, though developed. I may almost positively say without the access of pollen."

Again this spring (1894) a number of flowers were similarly treated, and several fruits have set, and to all appearance are developing normally, though all pollen was *excluded* and thus there was no fecundation.

The navel fruits developed last year from emasculated flowers, on examination, were found to be perfectly seedless, with the exception of a few rudimentary seeds. Though my experiments have not been extensive enough to be conclusive, it yet seems from the results attained that the navel fruits possess the faculty of developing without pollination and fecundation.

Mr. Webber found more seed in fruit which had developed from cross-pollinated flowers, and advises, very wisely I think, against the attempt of growers to secure the cross-pollination of the navel trees in the hope of securing a large crop of fruit. The effect of cross-pollination apparently being, he says, the production of seedy fruit, but not necessarily more fruit. My experiments, with those of my students at Pomona College, were quite extensive, and showed for the one year (1894) that no increase of fruitage resulted from cross-pollination. I think it is certainly true that good seeds are never

produced by non-pollinated fruit. We notice in the case mentioned, that the egg-plants, cucumbers, and the navel oranges are all seedless.

We have long known that the law of parthenogenesis or agamic reproduction finds illustration among animals. Thus in case of our common aphids, and they are common in California this season, there are often several generations of females which never see any males, and yet which are entirely fertile and immensely prolific. This reproduction without males and is termed parthenogenesis. The male or drone bees, and various other hymenopterous insects are also illustrations of agamic reproduction. The queen bee may lay as a virgin, she may lay unimpregnated eggs at will, and she may lay after her sperm sack is depleted, and in all such cases those eggs produce males, while impregnated eggs always produce females, perfect as in case of the queen, or undeveloped as seen in the workers. It would seem that in cases of the navel orange, we have an illustration of this same kind of development. In this parallelism, then, between plants and animals, we see again the oneness of nature.

But why the navel, and why a similar occasional mark on the St. Michael and other varieties? Mr. George F. Ferris, of Claremont, believes the navel mark is the sign of proliferation. You have all seen a rose send a second smaller rose up from the axes. This duplication is known as proliferation. Pears and figs are said to occasionally do the same. Every orange, Mr. Ferris thinks, has a tendency to be proliferous. In small immature navel oranges we may see this promise in a sort of bud between the center of the orange and the point opposite the stem. Cut out the navel in a ripe orange and you may see the cells of the smaller orange; eat the little cone and you will distinguish the bitter rind. Occasionally you will see the smaller orange, which, like the proliferous rose, pushes entirely beyond the main or usual production. May it not be then that the navel is the sign of proliferation and that proliferation is correlated with absence of seeds? If so, it seems not unreasonable that the navel is a promise and sign of a very desirable characteristic, viz.: seedlessness. We may readily believe that in the absence of seeds, which always call for the major part of the nourishing sap, there would be more energy to push this usually latent bud. If this be true, we might look for fewer seeds in specimens of St. Michael and other varieties that show a navel, but might not always find it so, as seedlessness would be only one cause of extra vigor and growth in pericarp.

*Summary of Conclusions:* 1. Generally the pericarp of fruit and vegetables is not immediately affected by cross-pollination.

2. There are a few cases where there has been obvious and immediate effect of cross-pollination; enough exceptions surely to prove the above rule.

3. The Washington Navel, and probably the Australian Navel, has no pollen developed in the anthers, or so little that practically there is none.

4. The navel orange, like some vegetables, cucurbits, egg-plants, etc., fruits without pollen, but then always bears seedless fruit or fruit with small abortive imperfect seeds. They are plant examples of parthenogenesis.

5. It seems certain that no plant can bear seeds unless the flowers are pollinated.

6. There is reason to believe that the navel is simply the mark of partial or complete proliferation; that the embryo or bud may be in every orange, but does not develop unless pushed by extra nourishment, which would be very likely to be present, in case that no seeds were formed.

7. We see then that non-pollination in the navel orange is very desirable, for it insures seedless oranges, and a rare development as to size and flavor. Navel oranges, then, unlike most fruit, should be planted in a solid block and it is all the better if no other variety is near by.

8. It seems probable that the navel is slow to take pollen, else we would have more cross-pollination and more navels with seeds.

9. As the navel is correlated with seedlessness, and consequent excellence, we may be even more pleased with the characteristic mark of the navel orange, and rejoice that our favorite fruit has so appropriate a name, which is significant as a sign of surpassing excellence, especially as this par excellence orange can be grown nowhere else to the marvelous perfection which marks its production in our own rich, sunny southern California.

10. If it be true, as some affirm, that the Washington navel in some sections of southern California is of surpassing excellence; if the fruit, as is often asserted, is better in some orchards than in others, even in the same neighborhood; and if, as some believe, it is superior in parts of the same orchard, then these facts are to be explained not by pollination, but by differences of soil, possibly aided by more favorable climate in case of different sections. Everywhere in the organic world, among animals as well as plants, high development and superior excellence are accompanied with greater impressibility, sensibility, and susceptibility to changes through environment. And so the unapproachable navel orange is quick to feel the hand of environment, and quick to respond to the most delicate influence that may look to its deterioration or to its betterment.

## The Future of the California Fruit Industry.

By GENERAL N. P. CHIPMAN of Red Bluff at Yuba City meeting of the State Horticultural Society.

At a time of universal depression in all branches of agriculture, planters who have staked their hopes upon horticulture naturally look with some misgivings into the perspective of the future. Two somewhat discouraging years have come and gone in succession, and the present outlook, even with a short fruit crop east of the Rocky mountains, is not particularly reassuring. And yet, in my mind, the future of the industry in California is logically as certain to richly reward the orchardist as can be predicted of any pursuit in our State.

Much depends upon the soundness of this forecast, for it must be conceded that the material increase of rural population, the subdivision of our large land holdings, the establishment of homes on comparatively small areas and the application of our soil and climate to their highest uses can come about more quickly, if not exclusively, through the success of our orchards than by any other means. If it could be announced as certain that fruit growing for profit in California has been demonstrated to be a failure, the effect would be more disastrous to the permanent growth and prosperity of the State than any other conceivable announcement that could be made. To say that we have reached the limit of profitable fruit growing, or that we cannot grow fruit profitably, is practically to warn thousands of families, who are shaping their affairs toward making California their future home and horticulture their future occupation, to abandon their dream of Arcadia.

It becomes highly important therefore, Mr. President, that we do not deceive ourselves nor the world at large upon so serious a matter. I do not claim that California offers no attractions in the field of agriculture except horticulture. I can see great agricultural possibilities apart from fruit growing in our soil and climate with the aid of rational cultivation and diversification, and with the intelligent use of water. Some day I intend to point out these advantages, but I cannot now.

The future of any industry, either in manufactures or in agriculture, is always problematical. There will arise conditions, impossible to foresee, that for a time at least will bring discouragement and often disaster upon almost any business. But I think the history of the world will show that the vineyards, gardens and orchards as a source of profit have retained a more permanent hold than any other form of agriculture.

What are the principal factors entering into the question? I think they are:

First—Can we grow fruit successfully?

Second—Is there, and will there continue to be, a market for it?

## PEERLESS ADAPTATIONS OF CALIFORNIA.

Need I stop to show that we can grow fruit successfully? If I were addressing practical fruit growers only, I would assume this as settled. But we speak to the inquiring homeseekers in all parts of this country who are eagerly seeking information about California horticulture. Besides, we are now endeavoring to read the future. I can remember, as a boy, portions of the Middle States and of the West where fruit was in abundance that cannot grow it now. Some great climatic changes seem to have taken place in a large portion of our country and have put an end to profitable fruit-growing there. Are changes likely to occur here that will destroy our trees or our crops and make the growing of fruit precarious? Are the natural conditions existing here favorable to fruit-growing, and are they likely to be permanent?

In a word, What are the conditions peculiar to and characteristic of California and that are favorable to horticulture?

I answer: We have the most remarkable climate to be found anywhere on the globe. This sounds hyperbolic. It is as easy, as is often said.

It is repeated by many who do not really know that it is so. It is read by many who dismiss it as California's boastfulness. Let me prove it by a simple challenge.

I challenge any person to point out on the globe a region of country 800 miles long and 100 miles wide, as I can point to in California, where can be grown in the same orchard, and in commercial quantities, in the open, every fruit that grows between the North Pole and the equator, except a few exclusively tropical varieties—practically every fruit known to commerce, except the date and banana.

You would have to chase all over Europe, from the North sea to the Mediterranean basin, to make up a cargo such as you can get in General Bidwell's orchard at Chico, or in San Diego county—700 miles apart. On this continent east of the Sierra Nevada mountains you could not make up the cargo at all.

Florida has a mild climate not unlike ours in its temperature, as registered by the thermometer, but the prune and raisin and foreign wine grape and the almond and the olive do not grow there, or in Louisiana which is also of a very mild climate.

There is scarcely a tree or flower or shrub or fruit



or cereal or vegetable grown anywhere in the world that does not find a congenial home in California, or that does not thrive as to the manor born.

We have laid tribute upon the fruits, nuts, vines, trees and gardens of the Holy Land, of Italy, France, Spain, China and Japan, the Australian group and Mexico, and behold a product every way equal, and often superior, to that in its native place. The possibilities of this wonderful climate seem to have no boundaries.

What it is that yields such marvelous results need not now be inquired into; but certain it is that there is something here—some conditions found in our valley region and along our coast south of the Sierran mountains and west of the Sierras, nowhere else to be found—that has made California the marvel of the world, the veritable Eden of the Book of Genesis on a stupendous scale. These conditions yield to us both quantity and quality unsurpassed. The characteristics of this climate exhibit themselves in all directions. Our wheat is the best that reaches Liverpool. Our sugar beet yields more pounds and greater per cent of sugar to the acre than elsewhere. Our vegetables are not only large, but possess every quality of high merit. Our fruits have all the points of a perfect product. Our commercial woods seem to have taken on values of their own, both of quantity and quality. Redwood forests exist where a million of feet may be taken from an acre and sugar pine with a hundred thousand feet to the acre. Our live stock feels the impulse of these precocious conditions, and the human family finds the atmosphere health-giving and invigorating.

Mr. President, this is not exaggeration. Those who have stopped to consider the characteristics of this wonderland will recognize the truth of all and more than I have said. We do not, however, as a people, ourselves fully realize the luxury, the wealth, the exuberance of God's bounties spread at our feet.

I have diverged a little, and yet I have not lost sight of the point in hand, which was to show a climate favorable to horticulture.

All these things of which I have spoken are made possible because we are protected from extremes of cold and because of atmospheric and climatic conditions to me unknown, but which give results peculiar to California. Now, are these conditions constant or likely to continue? I think this is demonstrable. The conditions arise from causes that are permanent, and hence I conclude that the conditions must remain also permanent.

We are protected from the cold waves that sweep across the continent from the Polar region down into Texas and Florida by a continuous mountain barrier more than a mile high and a hundred miles wide and heavily timbered from end to end. This great battlement or windbreak lies diagonally across the lines of longitude centering at the North Pole, and extends two thousand miles west, and to a point near the Polar sea.

Then, again, the Japan current flows along our west coast line, and for a thousand miles wide has been found to have a temperature never lower than 55° above zero. Across this current the trade wind comes to us almost without variability and having a constant temperature about the same as that of the Japan current. It varies but a few degrees winter and summer. Observations have been going on ever since the Mission Fathers settled here and began to plant the olive, the fig, the orange and the vine of Italy, Spain and France. No change has been noted in climatic conditions in the century. It is not possible, I think, that any permanent change can take place that would not permanently and radically affect the entire globe. We may, I conclude, safely rely upon the mountains, the Japan current and the trade winds continuing unchanged.

#### WILL OUR PRODUCTS BE IN DEMAND?

I come now to the second factor: Is there, and will there, continue to be a market for our fruits?

This question has vexed planters from the beginning and always will trouble those who do not extend their commercial vision beyond State lines or who do not study the history of fruit-growing and fruit-eating peoples.

Professor Wickson, in his valuable book "California Fruits and How to Grow Them" (a book which I want to say paranthetically there should be a law to compel every fruit grower to buy or go out of the business), has given us a chapter showing the struggles of planters, and I find this phantom throwing its shadow over every decade and shaking its incredulous fingers in the face of every planter since the industry took root.

For five years I have been endeavoring to combat the baleful influence of this bugaboo, and have put the argument into all the forms my wit could suggest to overcome what seemed, and still seems to me, an utterly unwarranted and unsupported fear.

Before again meeting the question, let it be said to the honor and glory of fruit growers, who are of all persons mostly interested, that they have uniformly and almost without exception, and against their pecuniary interest, if wrong, counseled the extension of orchards in this State, and have given to the recent planters every encouragement. This conduct is not only unselfish and patriotic, but it is the deliberate judgment of a class best informed that

fruit growing is profitable and has not reached its proper limits.

Now, Mr. President, let us for a moment consider the argument. Let us mass the points in support of our contention—not all the points, but enough to warrant us in our conclusion.

I wonder if the people of Spain and Italy and France, who have been growing fruit for a thousand years, have had to contend against this sort of scare?

I remember when the phylloxera threatened the vineyards of France a universal wail of sorrow went up from all Europe. No limit was placed upon the expenditure of Government money to stay the ravages of this pest.

I read in all the pages of Old World history of the fostering care given by Government to the growth of fruits. The olive of Italy has been the child of the Kings. A blight that would destroy the trees would be regarded as a greater calamity than a plague that would sweep away half the population.

Every available acre in any of the fruit regions of Europe that can be taken from other food products is given to vines or trees or gardens.

Among highly civilized peoples fruit and wine are food and in no sense a luxury. Olive oil and wine and cornmeal mush, called *polenta*, is the most substantial noonday meal of millions of hard-working Italians.

I do not remember of ever reading of overproduction of wine in France or olive oil in Italy, although wines are made in many countries and olives grow in many countries. I do, however, read often of wine and oil being adulterated to supply a demand for which the pure article is inadequate.

Sometimes France has a large crop of prunes that taxes the merchant to sell, but the growing keeps right on. And so of the raisin crop of Spain.

I recently took up a report of the Bureau of Statistics of the Treasury Department. In it I found a statement of the apple crop of France for 1893. I confess my ignorance hitherto of the fact that France is a large producer of apples. But I found that in 1893 the crop was 8,564,093.638 pounds. Besides this enormous output, France imported over 11,000,000. She made that year 800,000,000 gallons of cider. The value of the apple crop was \$23,551,213. Here was a crop of a single fruit of over 42,000 carloads—a crop of one fruit greater in pounds than the combined pounds of all our fruits, green and dried, nuts, raisins, wine and vegetables shipped out of this State for 1893 or 1894, and yet we are cautioned to stop planting, with twice the population of France to supply.

We are apt to exaggerate the importance of our fruit crop, because it has grown rapidly and compared with the recent past is very large; but it is really insignificant.

There are a half dozen counties in western New York that some years produce as many pounds of apples as the crop of France for 1893. The Census Bulletin, No. 38, for 1890 showed that a few counties along the Hudson river and the New York and Erie canal send to market 5000 carloads of table grapes alone, and this is probably not one-tenth of the grape crop of the State.

In line of the argument let me ask: If fruit growing is not profitable why is it that all over the Northern and Southern States millions of nursery trees are planted every year, and with almost certain failure staring them in the face they persist in trying to build orchards?

I have carefully studied such literature as is available to see whether the bearing orchards East are profitable, and I find the planters claim for apples and peaches and grapes a profit varying from \$50 to \$200 per acre. A Kansas apple grower assures me that with a crop once in three years his orchard is the most profitable property he owns, and is worth \$250 per acre.

#### FRUIT INDUSTRY OF THE UNITED STATES.

The uninformed have little conception of the magnitude of the fruit industry in the United States. When I was a boy living in the State of Ohio my father used to take a wagon of empty barrels to an apple orchard and help himself to his winter apples at his own price. Fruit-growing then had no commercial importance.

It has now. I would as soon think of driving into a merchant's warehouse and helping myself to a load of groceries as to drive into a modern orchard to supply my wants.

Fruit-growing has been lifted to a commercial plane and now occupies the best intelligence of the country in the orchard, in the counting-house and in the world's markets.

The eleventh census shows the peach acreage alone to be 597,736 acres, and the value of the product \$76,160,400, and that over \$90,000,000 were invested in the orchards for the census year. Here is evidence that the Americans spend \$1.25 per capita per annum for peaches alone, and that the peach orchards yielded about \$130 per acre as an average of the whole.

Large as this seems, it is less than one-tenth of the value of the whole fruit industry. The investment in horticultural pursuits is over one thousand million dollars.

The pessimist retorts that there is the highest

evidence of overproduction. It is nothing of the sort. It is the highest evidence that American people are coming to their senses and are eating more fruit, if not less meat.

In 1880 we shipped out of the State 546 carloads of fruit, not including wine.

In 1890 we sent out of green and dried fruits, nuts, raisins and canned fruits 16,195 carloads.

In 1894 we sent 31,274 carloads.

This looks like an awful leap into the dark, but don't forget those half a dozen apple counties of New York with 40,000 carloads of apples.

If you will take your pencil and multiply these 31,274 carloads of ten tons each by 20,000, and divide the product by our population, you will have nine pounds per capita for the year, or about three-fourths of a pound a month.

And so this enormous quantity dwindles down to a very small affair.

Where did this fruit sell? The dried and canned fruit probably distributed itself widely. But the green fruit, deciduous and citrus, of which there were 14,875 carloads, was not widely distributed. According to figures compiled by Mr. Wm. H. Mills, it was consumed among about five million people.

Mr. Alfred Holman and Mr. B. N. Rowley and Mr. John Isaacs reported to the State Board of Horticulture "that the districts in which our fruit is offered are almost insignificant when compared with the wider districts where fruit is wanted, but to which it never goes." They gave a list of twenty-nine cities of over 50,000 population to which no California fruit is shipped direct.

Is it not a reasonable deduction that our present population would take twice the amount we ship if we could get it no them?

Our profits in 1894 were small. Sometimes shipments showed a loss.

But the marvel is, that we could sell at all in the face of the hardest times this country has known in fifty years. As it was, there was some profit on dried fruits and would have been on fresh fruits if the cost incidental to transportation had not eaten it up.

The fresh-fruit shipments may be almost indefinitely expanded when we shall have found a car that does not require expensive artificial means to preserve the fruit in transit. That such a car will soon appear cannot be doubted. I believe the Perkins process of utilizing compressed air would give us the required car now.

A little liberality on the part of growers would have placed this car in use this season. However this may be, the way will be found.

Then again in our direct product we must break down the numerous profits between producer and consumer. The prune that I sell for 4½ cents per pound must not cost the consumer 12½ or 10 cents. In front of the leading fancy grocery store in San Francisco I saw recently dried pears marked 12½ cents per pound. They did not cost the proprietor half that much.

To make fruit growing profitable we must also take the best of care of our orchards and offer nothing but good fruit well prepared and packed. Such fruit always has sold at a profit and always will.

I have confined my remarks to the American market, and so have limited our sales. Why may we not look abroad for the world's trade?

There is an established market the world over for prunes, raisins, nuts, olives and olive oil, wines and brandy. Dried apples also have a wide market abroad. Our other dried fruits should sell there. Canned goods are much used everywhere.

Important as this matter is to us, there never yet has been an intelligent and persistent effort to exploit foreign markets. Some spasmodic and limited efforts have been made but no more.

In compiling the shipments for 1894 in my annual report to the State Board of Trade, I found that nearly ten per cent of our dried fruit, excluding raisins, now goes to foreign ports by sea from San Francisco. To some we send quite largely of canned fruits, but the list is more remarkable for showing either no shipments or very light ones to certain countries than it is as showing where we sell.

It appears that Russia, for example, did not buy a dollar's worth of our orchard or vineyard products, although she is a large consumer of the very fruits, wines and brandy for which California is famous.

We have some prejudices to overcome abroad, and we must teach the art of preparing our dried fruits for the table. All these things belong to the domain of commerce, but if exporters and trades people will not undertake it we must ourselves do so.

#### THE FUTURE.

I know of no field of enterprise more promising than that offered to California orchard, garden and vineyard products now lying practically fallow in foreign lands.

I do not think I need say more.

We have had with us during the past ten years some of the most distinguished agronomists in the United States. They came here to study our climate and soil in their relation to horticulture. These men have all returned to their homes deeply impressed with the phenomenal and exceptional conditions



found in California. There has not come from one of them a note of warning or of doubt.

Savants and scientists from nearly every quarter of the globe have dwelt among us for a time and have studied our resources and our possibilities. Their reports have eloquently portrayed the marvelous range of our products, and have especially extolled the unparalleled advantages we possess in the department of horticulture. With this mass of unbroken and concurrent opinion there should be no doubt as to the conclusions reached.

The most sagacious observer of America's development—a man who perhaps to the day of his death took as comprehensive a view of the relations of agriculture in all its forms to the growth of the nation as any man then living—declared as early as 1859 "that fruit growing was destined to be the ultimate glory of California."

In that early day the glory of California apparently lay in her mines. The world was still under the spell of her glittering nuggets that threatened the demonetization of gold. We had not yet taken a single decisive step forward in agriculture. A transcontinental railroad was but the optimist's dream. But Mr. Greeley saw beyond. He perceived a great future before this people. His vision embraced the magnificent forests of commercial woods; it embraced the possibilities of a varied and diversified agriculture; it took in our relation to the commerce of the world by means of the Pacific ocean; it comprehended our vast mineral wealth; it foresaw an empire here. But the crowning glory of all was to be fruit growing.

What was prophecy in 1859 is becoming an accomplished reality. We have only to penetrate the cloud which hangs over all occupations and all industries at this moment throughout the globe, which at the worst can be but temporary, and the future of fruit growing will stand out as Mr. Greeley said it would—the ultimate glory of California.

#### Using Poultry Manure.

Poultry manure is an excellent plant food. Poultry keepers who have fruit and vegetable gardens should aim to save every particle of it. It is one of the strongest and best fertilizers known. Its full value depends upon how it is kept. As more droppings are produced at night, the greatest supply will be where the fowls roost.

The roosts should be so arranged that the droppings will all fall on the platform. Cover the platform about one-half inch deep with some kind of absorbent. Dry soil or plaster is generally used. The main point is to save the ammonia. Poultry manure parts with its ammonia very rapidly during the summer months.

If the manure is to be kept in the best possible condition, it should be collected every day, early in the morning, while it is damp, as much of the ammonia is lost during the process of drying, and the longer it is exposed the less valuable it becomes.

Pack it in barrels and keep it under cover. Keep it moist, not wet, by sprinkling it with soap suds from the family washings. If kept damp, it will retain all of its ammonia, and the insoluble portions are reduced and rendered more available as a plant food.

#### A Cicada at Santa Cruz.

TO THE EDITOR:—I enclose small tin box with bug in it. I think it is a kind of locust. Can you tell me its name, and whether it is or is likely to be a pest? It is the first of its kind I have seen. J. CHITTENDEN.  
Chittenden, Santa Cruz Co.

The insect is a *Cicada*, of which there are several species found in this State. The genus *Cicada* includes the "seventeen year locust" and others which have long but definite periods of transformation, also those of more frequent multiplication. In California the *Cicadas* do not occur in sufficient numbers to do noticeable injury, although there has been for years in the region about Dutch Flat a species which lays its eggs in the twigs of orchard trees and does some injury thereby. This appearance at Santa Cruz is not alarming in itself. As already stated, the insect seldom appears in sufficient numbers to be a pest.

#### Pruning Prune Trees.

Mr. S. Gubser of Lordsburg, who has a good prune orchard in bearing, gives the *Cultivator* his ideas on pruning, as follows:

Cut the trees well back upon setting—say twelve to eighteen inches. Cut the first year's growth back to eight or ten inches, leaving but three limbs in the proper places. The second year cut the new growth back to two feet, leaving but two new limbs on each former one. The third year cut the new growth back to three feet, leaving but two limbs in place of each one before. This will give the tree sufficient limbs. Short laterals or fruit spurs will form on each of the upright limbs, and it is on these the fruit is borne from year to year. If too many limbs are left on the tree the fruit spurs are excluded from the sun and they die. I would not advise pruning after the third year.

## THE BOTANIST.

### Romance of Plant Life.

Now that the season calls one away from the great deeds of the garden and beguiles to rest in the shade something entertaining will be acceptable rather than details of practical work.

Dr. Morris, Assistant Director of the Botanical Gardens of Kew recently delivered an address before the Richmond Athenæum in which he tells of some vegetable curiosities that he or other botanists have found to be true. He says:

I shall present an address, and in my case shall confine myself to subjects of special interest that have been more or less worked out at Kew or lately been illustrated by specimens contributed to the storehouse of botanical information in the magnificent museums at Kew. In plant life, as in animal life, there are certain phenomena familiar enough at the present day that at one time were utterly disbelieved in. Others, not so extraordinary, were looked upon with a certain amount of polite incredulity; while not a few were simply ignored as not worthy of serious investigation.

*Cocoanut Pearls.*—The cocoanut palm is one of the most striking and characteristic trees of tropical shores. Its uses are too numerous to mention. You are familiar with the fruit, a hard, brown nut, lined inside with white flesh, and having a central hollow usually filled with milk. A cocoanut pearl is now in the museum at Kew. It is egg-shaped, perfectly white, and composed almost entirely of carbonate of lime. It has, in fact, a somewhat similar composition to the pearl of the oyster, and yet there is little doubt it is a purely vegetable product. Dr. Kiedel, of Utrecht, had fourteen cocoanut pearls in his possession. One of these, he says, he found, himself, in a cocoanut in 1866, at Holontalo. Besides these cocoanut pearls, Rumph describes what he calls "melate" pearls, taken from the flowers of a jasmine; and a "tjampake" pearl taken from the flower of a *Michelia*.

*Opals in Bamboos.*—Bamboos are the giants of the family of grasses. Their majestic plumes are the glories of the tropics. The bamboo stem is usually hollow, divided into numerous pockets by plates inserted at the joints. This hollow is formed by the rending apart of the process of growth. In the very young state the cavity is filled with a jelly. When this jelly dries up there is sometimes, but not often, a mineral deposit known to the natives of India as "tabesbeer." This is one of the most curious products of the vegetable world; it is, in fact, an opal, formed under somewhat remarkable and anomalous conditions. When heated it becomes phosphorescent. It holds as regards the power of refraction an intermediate place between water and gaseous bodies. Brewster summed up his investigation by saying that all varieties of tabesbeer were in composition and physical character, true opals.

*Stones in Trees.*—Another remarkable occurrence is the deposit of mineral matter in the wood of trees. This is not accidentally included within the trees during the process of growth. It is a deposit from the sap of the plant, often occurring in some trees in large and appreciable quantities. The explanation is as follows:—Lime is dissolved by rain water containing carbonic acid gas. This is taken up by the plants, and afterwards when the gas parts company with the solution the lime is deposited in a fissure of the wood, as we find it in the inside of a boiler or a tea kettle.

*Taste Spoilers.*—We pass now from the class of mineral deposits in plants to certain properties possessed by plants affecting the sense of taste. Some such plants we may call taste spoilers, for they produce a singular effect on the nerves of taste, completely paralyzing them in regard to the appreciation of certain substances. The most remarkable of these is a plant known in India as Mera-Singi. This was brought into prominence some time ago by a distinguished vice-president of the Richmond Athenæum, Sir Mountstuart Grant Duff, late Governor of Madras, who first sent some of the leaves to Kew. The plant is a stout, woody climber, and the roots have been long esteemed as one of the numerous remedies for snake bites. Edgeworth discovered that chewing the leaf destroyed the power of the tongue to appreciate the taste of sugar; powdered sugar taken immediately after, tasted like so much sand. The Mera-Singi has, therefore, been recognized as a most interesting plant. If sugar is taken in combination with other food, as for instance, in ginger-bread, the pugnacity of the ginger is alone detected, the rest is tasteless meal.

In a sweet orange the taste of the sugar is so suppressed, and that of the citric acid so developed, that in eating it resembles a lime in sourness. The influence of the leaves strangely enough does not affect saline things nor astringents and acids. It does, however, affect bitter things, for quinine tastes like so much chalk. Such a plant might possibly be employed for masking the taste of nauseous medicines; but we do not yet know how far the Mera-Singi may counteract the properties of the drug.

At the opposite pole of the taste spoilers may be

placed the taste improvers, plants that possess the power of rendering sour or acid substances perfectly sweet. Of these the "miraculous fruits" of West Africa are very striking instances. Some are borne by a tree belonging to the same family as the gutta-percha tree. It flowers in June or July and produces fruit about the size of small aloes, first green and afterwards dull red. They are covered with a softish pulp that tastes at first slightly sweet only. The strange part is that this pulp, although slightly sweet in itself, possesses the power of imparting so extraordinary an impression to the palate that the most sour and acid substances become intensely sweet, so that citric or tartaric acid, lime juice, vinegar, and all immature fruit of a sourish character lose their unpleasant qualities and taste as if they had been solely composed of the sweetest sugar.

*Coloring the Skin.*—Before leaving this class of plants I may mention that the pulp of a wine palm, in some parts of America, affects not the organs of taste but the color of the skin of persons using it. A regular drink is an emulsion prepared from the pulp flavored with sugar. If used at all liberally the skins of the natives become deeply tinged with a beautiful yellow color. During the season, when the fruits are plentiful, the natives acquire the yellow tinge almost as regularly as the birds their nuptial plumage. A still more pronounced effect is produced in Jamaica on horses, by feeding on the leaves of the wild tamarind. They lose all their long hair in their manes and tails. The animals thus denuded look like scarecrows. The effect is singularly grotesque.

*Jelly-Making Plants.*—The peculiar mucilage just noticed in the taste improvers recalls the presence of a somewhat similar, but not an identical substance in other plants. There is pectose or a gummy substance found in the seeds of quince, but more familiar to use in the linseed. It is also present in ripe fruits, and it imparts to their juice the property of gelatinizing when cooked.

In Ceylon there is a plant called Kessipissan, which holds mucilage or pectose in its leaves. I was much struck with an experiment made with this plant soon after my arrival in the island. A friend took some leaves and crushed them in water. Within a few minutes the water was so thoroughly gelatinized that it could be taken up in the hand and thrown about like a compact mass of jelly. This impressed me at the time as very remarkable. After describing the Para-para, of New Zealand, which may very well be called the bird-line tree, which captures birds by its viscid fruits, the lecturer proceeded:—In Jamaica I described many years ago a grass-like plant, a bird-catching sedge, that possessed the most effectual apparatus for the purpose. Here is a slender plant, not more than eighteen inches high, with narrow grass-like leaves. The flower heads droop over streams and rivulets near which it grows. If carefully examined it will be noticed each floret is furnished with a highly specialized bristle attached to the base of the fruit. The upper part is furnished with a wonderfully formed hook, so elastic and tenacious that once it takes hold it cannot be removed, except by carrying away the fruit attached to it. The object of the hook is no doubt to secure the distribution of the fruit. If a large bird or animal passes within reach the hooks immediately attach themselves to it, and the fruits are carried to fresh localities. If, however, the bird is small it is unable to detach the hooks from the plant, and it is effectually caught. The object of the plant in this case is defeated, and the bird dies. I saw several small birds ("grass-quits") caught by this Jamaica sedge, and released them by my own hands. The plant is abundant in mountain places in the West Indies or Central or South America, just in the line of flight of migratory birds passing north and south. The hooks evidently do their work most effectually in assisting to distribute the seeds. Catching the small birds must be regarded as the result of accident rather than design, for the plant does not profit by it.

## FLORIST AND GARDENER.

### The Dwarf Limas.

Californians who have been experimenting with the dwarf Lima beans which have been recently brought out will be interested in the results of a study of these varieties made by Prof. Bailey of Cornell University. His conclusions are as follows:

I am convinced that these beans, as a class, are very valuable. Their great merit is earliness. They are from two weeks to a month earlier than the tall varieties from which they came. Their productiveness has not been reduced in proportion to the reduction in size of the plants, so that I believe that it is possible in the North to secure greater total yield per acre from the dwarfs than from the pole varieties, seeing that the plants require less room. They are also much cheaper to grow. They require no poles. In central New York the tall Lima beans are always a precarious crop, on account of their lateness and the liability of being injured by mid-summer drouths at the time when the pods are set-



ting. The earliest varieties of these dwarf Limas are those which are derived from the Sieva type, as Henderson and Jackson. The following field notes of the varieties indicate our experience with them:

*Henderson's Bush Lima.*—Very dwarf, with only an occasional plant producing a feeble tendency towards a climbing stem, requiring no more space than field beans; plant compact, bushy, very productive and continuing long in bearing; very early; beans small, flat, clear white; quality good. A patch planted on the 6th of June last was bearing well the second week in August, notwithstanding the almost unprecedented drouth. An occasional plant produced speckled beans. This seems to be the best variety for earliness, and its great productiveness and habit of long bearing are additional recommendations. The pods also escape the mildew, which is often serious on the late, thick-podded sorts. While good in quality, it lacks the buttery and rich quality of the true Limas.

*Jackson.*—This variety, commonly known as Jackson's Wonder, differs from the Henderson in having brown-speckled beans, and in a less dwarf and compact habit, and is possibly a little later. In productiveness it even excels the Henderson. All of the vines in our plantation have made a diffuse, sprawling growth, and many of them make twining shoots two feet long. On account of this diffuse habit and the color of the beans, it has seemed to us to be less desirable than some other varieties. Its great productiveness, however, is a strong recommendation.

*Northrup, Braslan and Goodwin Dwarf Lima* I know but little about. I have tried it only a single season in a small way. It is apparently much like the former varieties, but the beans are uniformly dun-colored.

*Thorburn or Kumerle Dwarf Lima.*—Very bushy and dwarf bean with no tendency to climb; leaflets thick, long-ovate or lance-ovate, more or less deltoid at base; pods thick and large; beans white, tumid, of excellent quality; rather late, and moderately productive. With us seeds planted June 6th began to give edible beans the first and second weeks in September. The plants are stout, ten to eighteen inches high. Many persons consider the potato Limas—of which this is a dwarf type—to be superior to the Large White Lima in quality. Dreer Bush Lima is the same, having been introduced from Mr. Kumerle's stock.

*Burpee Bush Lima.*—A true Lima bean. Very dwarf, although somewhat taller and wider growing than Thorburn (sixteen to thirty inches high), with little or no tendency to climb; leaflets broadly ovate; pods large and thick; beans as large as pole Limas, very flat and veiny, of the highest quality; season medium to late, beginning to ripen about two or three weeks after the Henderson; productive. On our grounds this has been the best single variety of dwarf Lima.

With us last year the Burpee was rather earlier than the Thorburn, although there is little difference in season between these two types.

## THE DAIRY.

### The Dairy Cow.

Let the milk flow be what it may, feed alone cannot control the quality of the milk, said John Gould recently to the students of the Ohio State University. The cow has an individuality of her own, a born milking habit, and the greater the number of her ancestral granddams that have possessed this milking trait, the greater the probabilities that this cow will possess like qualities. Remember this, that no man ever stimulated a cow into good performance that did not have this born quality of development to start with; but thousands of heifers that were born to make the best of cows have been utterly ruined by bad feeding, cruel treatment and needless neglect. Success in dairying implies that a dairyman should raise his own cows as far as he can, and buy, if he must, wisely. So he must be a judge of cows, a collector of dairy form and preferences, and a reader of cow character. Better cow feeding and handling of cows, to the average dairyman, would carry with them greater success. All this talk about making cows hardy, tough and constitutionally vigorous, beyond what we feed into them by wise selection, should be eliminated as quickly as possible from our dairy wisdom. At best our cows are boarders, and profit means that for part of the year—the longer the period the better—they shall pay us rates so high that we can in midsummer give them free entertainment for a few weeks.

I do not plead for more fussing and pottering with this cow, but a little more rational care, and we should sooner begin the extra care of the milker. A really kind-hearted man may without thought actually abuse a cow by neglect. I have seen this last autumn, a dairy of fast freshening winter milkers stand for hours, yes, days, in the aggregate, in the chilly, drenching rain, rounding their backs as the deluge of water broke across their spines, and go into camp at night in the muddy fence corners of a

long, unprotected lane; and these cows, mothers, even if cattle, were contributing as best they could to their owner's living. I don't think he ever thought of the milking habit of these cows as a maternal function, artificially prolonged—the intended food for offspring turned by the hand of man into the channel of commerce—and so denied them after offices of a mother. No other benevolence of Nature would thus have contributed to him, save this unfathomable beneficence of motherhood whose office is forever to give, even if draining the fountains of life-support itself. Success must come nearest to those who recognize to the fullest extent this underlying principle of attaining success in dairying. Whatever will best administer to the comforts of the mother cow—quiet, care, warmth, comfort, succulent and stimulating food, pure air, clean water, and regularity of attention—will succeed, for on these hang the law and the profits, so far as concerns the cow.

### A Dairy Lesson from Abroad.

If there is any one general rule upon which all dairy experts insist, it is that of cleanliness. Very often the only difference between a cheap product and one that brings the top price, lies in the care taken to keep the article pure from the barn to the commission house. This subject is one which is often discussed, but which needs to be constantly emphasized.

The president of the Illinois Dairyman's Association, in his recent annual address, made a suggestive comparison between American and foreign dairy methods, as follows:

I have seen a great deal of countries where they keep dairy stock, and I am satisfied no part of the world has ever been a success in the dairy business which was not strictly clean and careful with the way of keeping the dairy, and of handling milk and all parts of the dairy business. You go through Holland, I think one of the finest cheese countries in the world, and you will find everything is strictly clean—cleanliness, in fact, is Godliness with them, for they keep their stables as clean as many of us do our houses—everything is swept clean so you could sit down and take dinner in their stables when the cattle are turned out. The ceilings are varnished, and after the cattle are turned out they are as clean as a common house, and everything is in the same shape.

The cattle are always clean, and in caring for them the owners' aprons, wooden shoes and everything worn are strictly clean and kept that way. They keep good cattle, and make a success in making good cheese. At least, they furnish cheese largely for the London and Paris markets. So you may go on until you reach Sicily and Italy, and the dairy countries there, and you will find no dairying done, and no cleanliness. I have been down into countries like Italy and Sicily, Bulgaria and Servia, where the people are filthy and dirty and they have no milk. We used to ask them in Sicily to have an early breakfast in the morning and they told us, "Yes, but you can't have any milk for your coffee until the goats come up." They didn't know what cows were; they don't make butter, or anything in that line.

So you will find, to make a successful dairy, start out with cleanliness.

### Dairy Division at Washington.

A Washington dispatch says that a dairy division has been created in the Department of Agriculture, and that it will be organized about the 1st of July. Commenting on this, a Chicago paper says: "The purpose of this division will be to collect and disseminate information about the dairy industry of this country. The wisdom of such a department cannot be questioned when we consider the wonderful development of the dairy industry in this country in the last twenty years. Its growth and development have been so phenomenal that it is almost impossible for dairymen to keep track of it and secure the statistics necessary to show the production of butter and cheese."

Major H. E. Alvord has been appointed chief of the new dairy division. Major Alvord is an ex-army officer, a native of Massachusetts, a former resident of both New York and Virginia and ex-president of the Maryland Agricultural College. For many years he has given special attention to the dairy industry, and is well fitted for the new duties which he now assumes.

### Don't Stint the Cows.

Farmers' Bulletin No. 22, United States Department of Agriculture, "The Feeding of Farm Animals," is a valuable little pamphlet for those interested in the subject, containing, as it does, a number of tables and much instructive reading matter. The following extract is one of the really sensible things:

"The stingy feeder stints himself as well as the cow. She suffers from hunger although her belly is full of swale hay, but she also becomes poor and does not yield the milk and butter she should. Her milk

glands are a wonderful machine, but they cannot make milk casein (curd) out of the carbohydrates in coarse, unappetizing, indigestible swale hay or sawdust, any more than the farmer can make butter out of skim milk. She must not only have a generous supply of good food, but it must contain sufficient amounts of the nutrients needed for making milk. Until this fact is understood and appreciated, successful, profitable dairying is out of the question."

## THE POULTRY YARD.

### Care of Young Fowls.

Mrs. Flora M'Fadden continues her letters to the *Cultivator and Poultry Keeper* with advice about the treatment of the young flock. When a chick reaches the age of two months, is well grown, vigorous, clean and healthy, it would seem as though the battle was over, the victory won and no occasion for further worry. Not so, however. There is another crisis to be passed—one that is very apt to be overlooked. I refer to the process of losing the chick feathers and taking on the adult plumage. It is a great drain on the system, and the youngsters need careful looking after all through this period, which with the Leghorns and smaller breeds generally begins when between two and three months old. It depends somewhat, of course, on condition, growth and general development. With Plymouth Rocks, Langshans and all the larger breeds it comes considerably later.

Besides material for bone and muscle, the young birds should be liberally supplied with feather-forming foods. Well-scalded bran is especially good as a food element, aids feathering, and as an early morning food, given from the time the chick is three months old, is unexcelled.

Given well-bred, strong parent stock, well-hatched chicks grow into well-fed, well-managed but not pampered chickens, and why need they fall a prey to any disease? I would not give a fig for chicks treated like hot-house plants. Such fall by the wayside sooner or later—generally sooner—and it is well for the rest of the race that they should. In the poultry world "the survival of the fittest" is the true theory, and nine out of every ten raised should be "fit."

Good night quarters are essential to the rearing of healthy birds, and I would emphasize the importance of freedom from draughts. It is not possible to lay down set rules for the building of poultry-houses, but they might far better roost on the fence with the blue canopy of heaven for a roof than in a house where subjected to a direct draught.

Draughts cause colds, and a cold is the fore-runner of roup—the most dreaded of all chicken diseases. A cold is easily cured by removing the cause and treating birds in a common-sense way. Hot, soft food in the morning, with a plentiful sprinkling of cayenne pepper mixed through it, plenty of onions and green food to keep the bowels open, not too much grain, and comfortable quarters at night will generally effect a cure in a few days. If a fowl seems stupid and depressed, and is a particularly valuable one, a one-grain quinine pill given every other day as a tonic often acts like a charm. Do not take too much for granted. Make sure by personal inspection that the diseased birds are free from lice; for, if these bloodsuckers are drawing their vitality, they easily fall a prey to disease.

For roup proper, where the system has become so full of poison that the stench from the poor bird's nostrils is well nigh unbearable, I hold there is no cure. Such a bird, if apparently cured, is permanently weakened and is not good for anything. Gapes, as understood by Eastern poulterers, is a disease practically unknown in California. I have known people to contend that their chickens were suffering from gapes when all in the world that ailed them was a stoppage of the nostrils due from cold and an accumulation of phlegm in the throat.

One more disease sometimes assails a young flock. This is liver trouble, occasioned by over-feeding and under-exercising. The little fellows, though heavy in weight, look pale about the face and comb and act stupid and listless. Give them plenty of onions and cut down their soft food rations, giving them less grain also and making them scratch hard for every kernel.

However, let us return to our flock of thrifty youngsters that we have steered so carefully from the shell up. We were very careful as to the pedigree of those egg-shells, and the little flock that emerged from them have been given our most intelligent, untiring care and attention. We have neglected no details and have despised no information, be it from ever so humble a source, if it pertained to the welfare of those cherished birds. One, two, three, four months have passed, and if our pullets belong to the Leghorn family they have developed during the last few weeks unmistakable signs of maturity. The comb is large and graceful and not unlike in color the petals of a red, red rose. What, pray tell, can be more beautiful than a Leghorn pullet in perfect health, her plumage shining with the shimmering sheen of satin, her bright,



quick, glancing eye, her head daintily poised and ever alert, her proud, dainty carriage as she steps lightly along? And when some sunny morning in this first month of summer our ears are gladdened by a musical cackle and our eyes by the sight of a nicely rounded pearly sphere—it is so grossly commonplace to call it an egg—our measure of content is full. A few weeks later our hearts are made glad as we listen daily to a full chorus of these cackling announcements and the goal of “shelling” is reached.

## CEREAL CROPS.

### Why Wheat Is Proportionately Cheaper Than Other Products.

Growers have probably wondered why, in the decline of all commodities, wheat has apparently lost most value in the market. It is perhaps not true that wheat has done this everywhere, because there are some other things which have suffered severely in some localities, but the great markets of the world show that wheat has fallen farther than it should in the average decline in prices.

The Department of Agriculture has just published the result of an inquiry into this subject, of which we shall give an outline. Citation is made of the tables of prices of fifty-six commodities by Sauerbeck, of London, which have been collected from trustworthy trade journals or from reports of leading firms, covering the period from 1846 to 1894, inclusive. From these figures it is shown that the average prices for 1894 amounted to about sixty-three per cent of the average for 1867-1877. On the other hand, the English Gazette price for wheat for 1894 averaged only forty-one per cent of the average Gazette price for the same eleven years, the decline being fifty-nine per cent as compared with a general decline of only thirty-seven per cent. The fall in wheat is thus seen to be nearly one and three-fifths times as great as the general fall in prices, as indicated by Mr. Sauerbeck's list of commodities.

It may be noted that while the index number for wheat for 1894 is 41 that for flour is 48; that is, the price for the latter, as compared with the average for the eleven years (1867-1877) is over seventeen per cent higher than that of the former. It is also noteworthy that the relative price of barley is identical with the general average (63), while the relative prices of oats, maize, potatoes and rice do not differ from it widely, their index numbers being 66, 61, 60 and 58, respectively.

In the computations of the London *Economist* is seen even greater disparity between the decline in wheat and that of commodities in general. In the *Economist* we do not find average prices for the year 1894, but the price of wheat on January 1, 1895, is represented by the index number 39, whereas the general average of prices for the articles included in the *Economist's* list is 87.4 for the same date. That is, as compared with the average for 1845-1850, the decline in wheat is over 4.8 times as great as the general decline in the prices of commodities as indicated by the list of articles whose prices are recorded by the London *Economist*.

The greater magnitude of the fall in wheat as compared with the fall in general prices is undoubtedly due to the fact that it is one of the commodities whose production and transportation have been most largely cheapened by the progress of modern invention and mechanical improvement, coupled with the fact that vast regions in which land of great fertility could be had at a nominal figure were available for wheat growing as soon as the cheapening of transportation brought them within reach of the world's markets.

Not to speak of the phenomenally rapid increase of wheat production within recent years in the Argentine Republic and the increase to a greater or less extent in other countries, the facts as to the westward progress of wheat growing in our own country are sufficiently significant.

Computation shows that in 1859 the product of these newer lands amounted to only 13.2 per cent of the grand total of the United States. In 1869 it amounted to 30.7 per cent; in 1879, to 36.5 per cent; in 1889, to 50.7 per cent, and in 1894 to 48.6 per cent. That is, up to 1889 there was a continuous and rapid progress in the extension of wheat growing over new Territory, in which wheat is produced on cheap land adapted to the largest use of labor-saving machinery. Figures like these help to explain the fact that in spite of the low prices of wheat it is still supplied in sufficient quantities to meet the world's requirements. Expansions in regions where it can be produced cheaply, like our own States of the Pacific Coast and Northwest, or the Argentine Republic, tends to produce some surplus and depress prices, but this depression tends, in its turn, to cause diminished production in regions where land is more valuable and costs of cultivation higher; and thus it happens that, without any considerable overproduction, the price continues to fall as long as improved processes, cheaper transportation and access to cheap lands progressively lower the cost of producing the grain.

## TRACK AND FARM.

### Watering Horses when Warm.

An English cavalry officer and veterinarian writes as follows in the London *Live Stock Journal*:

Prejudice dies hard, and the hardest of all to die in the minds of grooms is that it is injurious to give a horse a drink of cold water when he is heated from exercise. Years ago, when I used to train horses for racing in India, I grappled with this prejudice, and clung to it with such tenacity that I used constantly to have my horses “off” their feed after a strong gallop. One day I returned to the mess-house very hot and very tired after a long run, and suddenly thought fit to mentally put myself in the place of a race-horse. “Shall I have,” I asked myself, “a better appetite for breakfast if I refrain from drinking till I have cooled down or if I have a drink right off?” Knowing that I could not eat heartily unless I had first of all a drink, I took it, and thereupon felt so fit to eat, and went so strong over a course of beefsteaks, ham and eggs, quail, muffins, etc., that I resolved to try the same treatment on my horses. My lead was attended with such success that nowadays all the trainers in India give their race-horses about half a bucket of cold water to drink immediately after a gallop, and with the best results as regards their appetite and health. I have not alone never seen, but have never even heard or read of any harm to a horse from drinking cold water when he was heated. I have, however, seen hundreds of cases of colic occur in horses from drinking water after being fed on occasions when they had, previous to eating, been deprived of water for some time. Were all grooms to follow my advice as to watering, I am afraid that many an honest and hard-working veterinary surgeon would find his income from colic cases seriously diminished.

### Care of Mares in Foal.

I contend that to have strong, vigorous foals dropped the breeder must watch carefully the requirements of each individual mare, and give them enough of nutritious food to keep them strong and vigorous; but care should be taken not to get them too fat, as it has a tendency to abortions; and, if carried to their full time, to weak foals. On the other hand, we should guard against excessive leanness, as the tendency in this is about the same as regards the foal; and the mare being weak, it will be difficult for her to rally sufficiently to supply the required amount of nourishment for her offspring. Probably the best way to handle the mare is to work her carefully during the entire time of pregnancy, or within a week or ten days of foaling time, but the work should be steady and regular. In the case of mares that are not worked, they should be allowed the run of pasture, with a comfortable, dry place for them at night. The feed in either case should be of a bone and muscle-producing character, such as oats, wheat and bran, which has a tendency to produce bony, muscular colts, while on the other hand the feeding of corn exclusively is inclined to produce in the foal a general weakness of muscles and a relaxation of the ligaments of the joints.—C. M. Jones in National Farmer and Stockman.

### Love for Trotting on the Increase.

Trotting is becoming more and more of a popular feature in sporting circles throughout Germany, says a correspondent to the Chicago *Record*. This year James Gordon Bennett has sent, for the first time, some fine American trotters of good records here to compete at the races in West End, Berlin, and a whole colony of American sporting brethren have found their way here likewise, so that just now they are quite conspicuous Unter den Linden. I hope there is no blackleg among them, as there were last year, when a certain member of the fraternity tasted German prison food for six months because of swindling practices discovered. The Emperor, too, is quite interested in trotting, and has just donated a fine prize, to be competed for next year by the breeders of the horses winning at the German trotting Derby.

## THE FIELD.

### Black Walnut and Mulberries.

Prof. George Husmann, of Napa, in his brief notes on desirable street trees mentions two, as follows:

The California black walnut is a beautiful tree in every respect, as many fine specimens in our streets and lawns demonstrate; it is much to be preferred to its Eastern congener, as it has darker, larger and more wavy leaves, grows much more rapidly and produces a much more palatable nut. There is a tree on the Simonton ranch, which, during the five years I managed the place, never failed to produce

a most bountiful crop of the finest and largest nuts I have seen of that variety. The tree covered about sixty feet of ground, with the lower branches almost sweeping the ground, and it must have been eighty feet high. It was an object of admiration to all visitors, and Mr. Leonard Coates thought the nut so superior that he propagated it as a special variety. The California black walnut is a first-class street tree in every respect; it is clean in its habits, dense in shade, symmetrical in growth, deep rooting and not liable to be injured by high winds, its only drawback being the difficulty of transplanting. All walnuts make a strong tap root, unless transplanted when very young or raised from the nut where they are to remain. But this deep rooting is, on the other hand, a point in the tree's favor, as it will not throw out any strong surface roots to injure lawns and sidewalks. The trees are very easily raised from the nut if it is put into the ground in the fall; if the nut dries out it will not germinate.

There are several varieties of mulberries which make desirable street trees. Downing's Everbearing is a variety, or rather a seedling, of the *Morus Multicaulis*—the variety used mostly for the food of silkworms. It has the beautiful, large, glossy leaves of its parent, but, in addition, bears a delicious fruit for nearly three months in succession, being about two inches long and of fine flavor. Lick's American, a variety originated by the late James Lick, is said to be fully equal, if not superior, to Downing's Everbearing. The wild mulberry of the East—*Morus Rubra*—is a fine shade tree, with fine fruit which varies, however, with nearly every tree. All of the mulberries are easily propagated from cuttings or layers, and they make desirable shade trees.

### Morning Glory Again.

TO THE EDITOR:—The practicability of hogs rooting out morning glory is questioned by a correspondent because “its roots reach a foot deep.” We of this section will not dispute that assertion. On our rich alluvial land, with no hardpan, there seems to be no limit to the downward tendency of the pest. A neighbor of mine, in digging a cistern, found morning glory as deep as he went—eleven feet—and I fancy he concluded that Chinese porkers were rooting at the other end of the plant. In view of this, and considering that each joint of the weed is burning with a fierce desire to perpetuate itself, the suggestion of the hog method borders on the ridiculous. The animals must be prepared to penetrate through to the antipodes, and the result will be redolent with failure and suffering snouts.

A straw stack placed on a thrifty patch soon becomes a glorious spectacle in full bloom—in fact the pest seems to recognize no limitations in either direction. It even defies statutory regulation and smiles blandly on our supervisors with their prohibitory ordinances. I have had success with “soda cake”—a waste product of the manufacture of dynamite—which, when dissolved in water, liberates great quantities of sulphuric acid. Others have used “distillate,” a product of petroleum, and even the crude oil itself. None of these, however, are any better than salt, and they are all open to the same objections. Persistent knifing is the only practicable method of subduing this formidable trespasser, and for this purpose we find the best tool to be a straight knife, which, when set properly, is self-sharpening. H. F. CLARK.

West Saticoy, Ventura Co.

It is reported from Alvarado that sugar beets are all up and growing finely. Notwithstanding the fact that a reduction in the price paid the raiser for sugar beets from \$6 to \$4 per ton, as large an acreage as last year is growing. Reports from Pleasanton show a similar increase. The wages paid in the factory will be reduced the coming season. Fifteen cents per hour is to be paid, instead of day's wages. The active sugar season commences about September 15th and ends January 15th. Two hundred cars of beets are expected from Contra Costa county this year.

### Poison for Cutworms.

In an exchange John Christison, of Clare, South Australia, is given credit for the “sure death to the cutworm.” He says: “The cost per acre of the preparation should not exceed twenty cents. Take thirty pounds bran, two pints molasses, one pound paris green; put the molasses into six quarts of hot water; add the bran and paris green, mixing thoroughly until the water is tinged with green. Place a spoonful of this near the plants and wherever the worms are, not getting it too near the stalk. If a new lot of worms hatch, the dose will have to be repeated. The worms will leave the plants for the mixture every time. The bran and molasses tempts them and the paris green does the killing.” This is much like our grasshopper remedy which has proved so satisfactory. We hope readers will try the above for cutworms when their season comes again, and let us know how it works.



## Patrons of Husbandry.

Observations by Mr. Ohleyer.

No American farmer, be he a member of the Patrons of Husbandry or not, can fail to profit by a careful study of the Declaration of Purposes of this purely farmers' organization. Their aim is patriotic in the highest degree and for the good of all mankind. It makes no apology for its existence, and, while believing that in union there is strength, it seeks to coerce no one to its way of thinking. If, through its widespread facilities and membership, it can benefit its adherents socially or industrially, all classes must of necessity be benefitted by the effort.

Of course, a general co-operation by the producers of the country would enhance their power and influence before the public and in the halls of legislation. Nevertheless their moderation and conservatism has placed the Order high above every other organization having for its object the enlightenment of the rural population.

In that portion of its Declaration of Principles relating to business appears the following on the transportation question, which should engage the interested attention of every farmer in the land:

"We wage no aggressive warfare against any other interests whatever. On the contrary, all our acts and all our efforts, so far as business is concerned, are not only for the benefit of the producer and consumer, but also for all other interests that tend to bring these two parties into speedy and economical contact. Hence we hold that transportation companies of every kind are necessary to our success, that their interests are intimately connected with our interests, and harmonious action is mutually advantageous, keeping in view the first sentence in our declaration of principles of action, that individual happiness depends upon general prosperity."

"We shall, therefore, advocate for every State the increase in every practicable way of all facilities for transporting cheaply to the seaboard, or between home producers and consumers, all the productions of our country. We adopt it as our fixed purpose to open out the channels in nature's great arteries, that the life-blood of commerce may flow freely. We are not enemies of railroads, navigable and irrigating canals, nor of any corporation that will advance our industrial interests, nor of any laboring classes. In our noble Order there is no communism, no agrarianism."

It will be remembered by every Granger that one of the most pressing objects contended for by the Order has been improved water transportation. The State Grange of California has repeatedly resolved instructions to Congress for the necessary attention to our navigable rivers. Notwithstanding the enormous increase of railroads throughout the world, the construction of navigable canals goes hand in hand with land arteries for the heavier products of the fields.

Of special interest to the California wheat grower may be the following, clipped from a recent issue of the San Francisco Bulletin:

### CALIFORNIA WHEAT AT MANCHESTER.

The British ship Sutherlandshire left this port February 15th for Queenstown for orders with 2800 tons wheat. She arrived off that port on the 3d and was ordered to discharge at Manchester, England, where she arrived on the 10th. The recent completion of the Manchester canal has made such an event possible. The Sutherlandshire has the honor of being the first ship to discharge a cargo of California wheat at this well-known and large English city. The event will probably direct attention anew to other proposed canals, one of which is to be constructed in Washington. The Nicaragua canal is bound to be built, and will shorten the waterway between San Francisco and New York, as against the Cape Horn route, by 10,753 miles.

This is in line with Grange doctrine, and the theme has been pressed upon the attention of Congress by members of the California State Grange, and

with tardy but at last gratifying success.

Within the year it has been frequently asserted that there is absolutely no hope for the wheat grower of the United States; that the cheap labor of foreign lands is pressing American farmers to the wall, etc. It will also be remembered that the RURAL continued to find encouragement in the situation for the depressed agriculturists, holding that with the fertility of the soil and labor-saving machinery, rendered possible by the dryness of our California climate, we could be more than a match for the economic production of the cereals.

Now comes Mr. Michael G. Mulhall, the English statistician, in the June number of the *North American Review*, in an article on "The Power and Wealth of the United States," in which the following language is used:

"If we take a survey of mankind in ancient or modern times, as regards the physical, mechanical and intellectual force of nations, we find nothing to compare with the United States in this present year of 1895, and that the United States possesses by far the greatest productive power in the world."

He asserts that the absolute effective force of the American people is now more than three times what it was in 1890, and that the United States possesses as much energy as Great Britain, Germany and France collectively, and that the ratio falling to each American is more than two Englishmen or Germans have at their disposal.

He points out by a careful comparison between the conditions in these different countries that an ordinary farm hand in the United States raises as much grain as three in England, four in France, five in Germany, and six in Austria. One man in America can produce as much flour as will feed 250, whereas in Europe one man feeds only thirty persons. Mr. Mulhall calls special attention to the fact that the intellectual power of the great republic is in harmony with the industrial and mechanical, 87 per cent of the total population over ten years of age being able to read and write.

"It may be fearlessly asserted," said he, "that in the history of the human race no nation ever before possessed forty million instructed citizens."

The Patrons of Husbandry in the Central and Eastern States find it quite practical to hold at least half their meetings with open doors, to which farmers generally are invited, and which seem to be well patronized, according to the reports published in their Grange and agricultural press. In many States and in hundreds of counties no other associations exist but the Grange for the education and edification of the country yeomanry, hence the growing popularity of the Order. At these meetings every question pertaining to the life on the farm is being discussed, and in not a few the meetings close with a lunch and the tripping of the "light fantastic."

Now to the question, "What is there in the Grange?" let us ask, What is there in a horticultural society, in an agricultural society, in a debating society, in a church society, in a Masonic or Odd Fellows' society, or in any other organization by the masses? And we answer, all may be found and advanced in the Grange. Partisan politics and sectarian religion alone are debarred from its deliberations. The organization is demanded by the times, and when the times offer something better we shall be prepared to enjoy it.

That we may not be accused of harboring but one idea at a time, and that idea centered on the production of corn and pumpkins only, the following are offered as a digression. They cover a variety of subjects well calculated to arouse thought or create a smile on the faces of Grangers and their farmer friends. Just now there is a dearth in the great pictorials, advising farmers how to render their business remunerative, but such as come shall have a hearing:

### NOTES.

The financial article in the London *Daily News* says it is reported that the directors of

the Bank of England talk of reducing the bank rate to 1½.

There are 370,000 acres under tea cultivation in British India.

Berosus says that wheat grew wild in Mesopotamia; Strabo said that it was found growing wild on the Indus; Homer thought that Sicily was its native home; while in our own time Balansa found it wild on Mount Sipylus in Asia Minor.

In France a legislator wants a law passed to heavily tax corsets. It heats all what a fool a man can make of himself when he tries and sometimes when he doesn't try.

Emperor William's wife is a much-suffering woman. She has to accept the amateur paintings and drawings of her husband as a Christmas present and pretend that she likes them.

One firm in Chicago has increased the wages of its employees ten per cent as a result of the revival in business. Never in the history of this firm has business been so brisk. This is a pleasing change from the lugubrious reports of the past two years.

At a recent banquet in Denver, given in honor of the woman candidates for the Legislature, a local wag offered the following toast: "The women of Colorado—God bless 'em. Formerly our superiors, now our equals."

It is said that the history of wheat cultivation in this country shows a steady decrease. Fields in New York that formerly produced twenty to thirty bushels an acre now bring from seven to twelve. The falling off is due to lack of proper cultivation.

There are in the United States at present 6,000,000 farms. About one-half the population of the Republic, or over 30,000,000 people, live on them, and these farm dwellers furnish more than 74% of the total value of the exports of the country.

There are 100 farmers in the New Hampshire Legislature, and they have formed a Farmers' Council, in which they consider all questions affecting agriculture before voting on them. They can control the Legislature and head off the roosters. The plan ought to work well in other States.

A story is going the rounds of the press about a farmer who went into a drug store and for the first time saw a phonograph. He was told to drop a nickel in the slot and hear the music. The farmer, doubting, put a nickel in the slot, put the tube to his ear, and, after listening a second, started for the door with a hasty exclamation: "Gosh all fishhooks, here comes a brass band and I left them mules unhitched!"

For better or for worse, that is our system of government; and so far as observation enables us to speak, if protected from the counsel of scientific persons who have grown gray in the pursuit of moonbeams, and from the Napoleons of finance who care no more about the money question than a professional faro dealer cares about the visible supply of ivory, we can safely take our chance with the merchants, the working people and the farmers of the United States.

"I'll bet," remarked Mr. Jason to his wife, as they sat in the family circle at the play. "I'll bet from the looks of it that the dress that there woman in the box is wearin' is one of them elegant dresses one-half off we seed advertised yesterday in the papers."

In Nevada the women want to be soldiers and are asking the Legislature to grant them permission to form a woman's militia. All Europe repudiates the theory that woman is inferior in physical strength to man, as the women are the real agriculturists of European countries. In Germany 100 women have been seen at work under a male boss in a beet field, while the men soldiers idled about the country.—New York Queen of Fashion.

The State Dairy and Food Commissioner of Ohio, upon analysis, has discovered that a large part of the chocolate on the market is an extract of guano. The Commissioner made a similar discovery regarding henzoic acid, used largely in the manufacture of chewing gum.

Fair Maiden—How savagely that cow looks at me.

Farmer Hayseed—It's your red parasol, mum.

Fair Maiden—Dear me, I knew it was a little bit out of fashion, but I didn't suppose a country cow would notice it.—Spare Moments.

### Defense of the Co-operative Buying System.

TO THE EDITOR:—On page 364 of the RURAL of June 8th Bro. Ohleyer gives Two Rock patrons of co-operation a dig in the ribs. Now, we give the brother credit for the utmost sincerity. He evidently displays a lack of knowledge of the wonderful liberality of country merchants in dividing profits for cash, as well as knowledge of actual per cent profit of the same country merchants. One of the leading firms of our local town offered us the magnificent sum of two per cent discount for cash, provided we would guarantee him all the trade of each member of our Grange. Now, when it is taken into consideration that said firm, as well as the others in said town, are charging a per cent of from about fifteen on standard articles, such as sugar, to as much as two hundred per cent or more on some articles,

averaging fully twenty-five per cent, the reckless disregard for profit and wonderful liberality in division strikes one almost dumb.

Repeatedly has our purchasing committee sought to have our local dealers fix prices on bills of goods running up to \$300 or \$400, but they evade it on one pretext or another, claiming they do not carry the brands called for or some other excuse.

Now, as regards the home market shibboleth: Does not fully ninety per cent of all produce sold to the local trader ultimately reach San Francisco for consumption? Can the local dealer, with his mixed, indiscriminate assortment, realize as good a price as the painstaking farmer who conscientiously packs his produce? The experience of the writer and his neighbors is that he cannot. Why? One local dealer told some poultrymen, among whom was the writer, that we would be fools to sell to him, or others like him, for the reason that we could sell our eggs for from two to seven cents per dozen more than he could get. If he shipped them they went for "store eggs." If we shipped them they went for "ranch," the above being the difference in price between "store" and "ranch" eggs.

The large cities of our own State being the consumers of our products mostly, it is manifestly to our interest to build up and foster them rather than some away from home, like Chicago, etc. Our local merchants nearly all buy direct from the East or from manufacturers, thus directly injuring the city wholesalers who are con-

(Continued on page 398.)



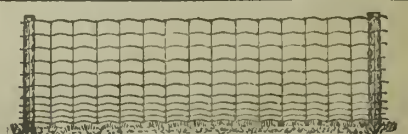
can be kept clean and sweet with Gold Dust Washing Powder. There is no soap, washing compound or cleanser that so thoroughly cleans milk pails, cans and other dairy accessories. It cuts the obstinate grease that will accumulate and lightens very much the work of keeping the dairy clean and sweet.

## GOLD DUST WASHING POWDER

is the greatest aid to hard-worked women. Invaluable for every kind of cleaning. Cheaper and better than any soap. Large package costs but 25c. at all grocery and general stores.

GOLD DUST WASHING POWDER has an additional value to the farmer for destroying insects. Send us your name and address and we will mail you an important booklet containing recipes for making kerosene emulsions, for spraying crops and trees and live stock.

THE N. K. FAIRBANK COMPANY,  
CHICAGO, ST. LOUIS, NEW YORK,  
BOSTON, PHILADELPHIA.



### FOUR OF A KIND.

A certain railway official wrote the officers in charge of fencing on four great Railroads, where "the Page" is in use, asking their "honest opinion" as to its value. He considered the answer so very favorable that he gave a large order for the Road he represented. The replies were confidential, but he stated that the strongest endorsement came from where "the Page" had been longest in use. If farmers took such precautions, those who furnish "cheap" wire fences would go out of business.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.



## THE HOME CIRCLE.

## Do All That You Can.

"I cannot do much," said a little star,  
 "To make this dark world bright:  
 My silvery beams cannot pierce far  
 Into the gloom of night:  
 Yet I am a part of God's great plan,  
 And so I will do the best that I can."  
 "What can be the use," said a fleecy cloud,  
 "Of these few drops that I hold?  
 They will hardly bend the lily proud  
 If caught in her chalice of gold:  
 But I, too, am part of God's great plan,  
 So my treasures I'll give as well as I can."  
 A child went merrily for a play,  
 But a thought, like silver thread,  
 Kept winding in and out all day  
 Through the happy golden bead—  
 "Mother said: 'Darling, do all that you can,  
 For you are a part of God's great plan.'"  
 She knew no more than the twinkling star,  
 Or the cloud with its rain cup full,  
 How, why, or for what all strange things are,  
 She was only a child at school.  
 But she thought: "'Tis a part of God's great plan  
 That even I should do all that I can."  
 So she helped another child along,  
 When the way was rough to his feet,  
 And she sang from her heart a little song  
 That we all thought was wondrous sweet;  
 And her father—a weary, toil-worn man—  
 Said: "I, too, will do the best that I can."  
 —Margaret E. Sangster.

## The Prisoner.

(Continued from last week's Rural.)

She got up, restless in her agony, and began to walk the floor. As she passed the window, the pictures outside froze her into a statue of chill fright. A peaceful picture a stranger might have called it—the old fashioned garden flooded with tranquil, evening light, and darkly shaped against the glow, his figure rimmed by the setting sun, a man leaning on an axe handle. Over the fence clambered a dog with a weight dangling at his heels. The weight—which was such as is used to hold gentle horses—caught on the fence and kept the dog captive, writhing and howling. Aggie understood it all in a flash. Adam had let the dog out of the wagon while he was waiting for the train, and Jump had dragged his weight all the way home. Her heart was in her ears, pounding her breath away, as she looked at the faithful, meek creature struggling to crawl up to the feet of the man with the axe.

"He'll kill him!" He said he would kill him!" she muttered. Useless as she knew her intercession to be, she tottered to the door—and stopped.

A most amazing thing had happened. The axe lay on the ground and Ned was patting Jump's head. His hand slipped down to the dog's neck—Jump all the time wagging his tail so violently Aggie could hear the thumps on the ground—and strap and collar fell together.

Bruce waved his hand, saying something at which the bound bounded away, to burst through the spring door and jump joyously on his mistress.

Bruce remained, his head sunk on his breast, in the attitude of one pondering deeply. At last he shook himself and walked briskly up to his own door. He entered, but did not come into the dining room, going directly upstairs. She could hear him moving about in the chamber which he now occupied.

What did it mean? What would he do next? Memories stirred in her heart of the days when he had been kind, when she had not shrunk from him, when even a timid affection and a pride that was very sweet in his manly strength and daring had begun to console her. She brushed away thoughts and visions; she cried out that she hated him, had always hated him, but his eyes would seem to shine again they had once or twice; she felt a kiss as timid as passionate on her hair, and, in a mixture of feelings she could not understand, found the tears rolling down her cheeks. His step aroused her. He was passing through the hall. Hastily she dried her eyes. He did not come in. She saw him going through the yard, wearing the good clothes he always wore to town. "He is going to town; I am glad, I am glad," said she. And as she rose and went again to the window she repeated, "I am glad. I wish he'd stay."

But in a minute she had left the

window and gone out on the piazza to ring the bell. "He ought to have something to eat before he goes"—so she excused her action to herself.

He was half way to the barn, where a hail had stopped him. Behind the honeysuckle Aggie, unseen herself, could see Adam Hull's horses trotting up to the gate. In the wagon beside Adam sat his wife, shielding her new blue outing suit with her husband's linen duster, and slipping her arms out of the duster as she drew in sight of the house.

"She will have to know!" thought the poor wife. She lingered and did not step out; though why she waited she hardly knew. Bruce stepped up to the wagon. He spoke with perfect calmness and civility.

"I was just going to hunt you up, Hull. Good evening, Mrs. Hull." He removed his hat. "Say, Hull, the dog you took came back, and I was glad enough to see him. I got in one of my d—d fool tempers at him for chasing a little sick chicken that's a pet and follows me about; and I wanted to cut the heart out of him. My wife punished me just right by giving him away. But I guess she punished herself, too; and anyhow, when the feller came back, and, you might say, begged my pardon, I felt all-fired cheap—"

"Did he get back?" cried Mrs. Hull. "I told Adam that was where he'd gone."

"Yes, ma'am. He came back with the weight on him—couldn't keep him, and the happiest dog you ever saw to get back! Now, that's what I'm coming to. I'd like to buy that dog of you, Hull, I've a Hereford calf—"

Adam interposed hastily, with the warmth of a much-relieved man. "Oh, take him, you're welcome—you see, we keep chickens, too."

"We wouldn't have him for a gift if you ain't going to hurt him," chimed in Mrs. Hull.

"I shall never lick him again," said Bruce very sternly, "but look here, you've got to take that Hereford calf. Your wife can take it if you won't. Say, Mrs. Hull, just come over to the barn and look at it once!"

Adam Hull wondered if he had dreamed of the violent passions of husband and wife when he heard Ned Bruce asking his own wife to supper, and calling Aggie to come out and help him keep them, and Aggie prettily seconding the invitation. "I guess they ain't so mad at each other after all," he reflected.

But his shrewder wife noted Aggie's red eyelids and said to herself: "Humph, Ned Bruce may be awful nice now; but I've heard of his temper before; I'm glad he ain't my husband!"

She accepted the calf, which Adam had fain declined; but she would not stay to supper. Ned and his wife ate the meal alone and almost in total silence. Neither of them had any appetite. After supper Ned, as usual, filled Aggie's dishpans and then went out in the yard. He was gone so long that the dishes were washed and his wife's brown head was bent over her sewing in a white halo of lamplight when he stood on the threshold.

He looked at her thus for a few moments—his handsome, dark face working—before he entered. He did not notice, being strongly moved, that she thrust her work into the basket near her; but he did notice her frightened eyes and how she half rose at his entrance, as if for a stranger. His mouth quivered a little. But when he spoke his voice was gentle and sad. "Aggie," said he, "when I get mad I don't know what I'm doing; and I got mad at Jump. I was angry at other things, too. I—ain't—I ain't so angry now. I'm sorry. I bought the dog back from Hull. He ain't Hull's dog any more, he's mine. Will you take him for a present from me? I'll never lick him again. Will you?"

Aggie did not look up yet. "Yes," Ned, said she, and she added a timid "thank you."

"That's all right. May I sit down here a minute? What's that you got there, sewing?" He only said it to make talk; he was embarrassed, this

young husband, before his estranged wife.

Before she could interpose he pulled the dainty bit of silk and flannel out of the basket. His face changed; his eyes flashed from his hand to her crimsoning face. Slowly the red dyed his own face. He could not speak; but she bent her head, and not raising it, she lifted the basket and pushed it in front of him.

"Wait—wait a minute," he gasped. "I—I can't—I'll be back pretty soon."

Then she was alone, and he had rushed out into the night. She did not know how he felt; she did not know how she felt herself; but suddenly she found herself at the door calling his name. More than once she called before he came.

"Don't you be running and hollering and exciting yourself," he said, as he came up the steps, and he stood back until she should enter the house. He handed her a chair, but he remained on his feet, and during the conversation that followed sometimes he would walk up and down and sometimes he would lean over the back of the empty chair in which he had sat, and sometimes talk with his back to her, staring out of the window—in all postures or motions showing an agitation that was plain likewise in his pallid face and sombre eyes and knitted brow, with the wet, black hair drooping over it.

"Aggie, I've got to talk to you. I ain't much hope it will make you feel kindly to me, but I've got to try to make you feel you don't need to be afraid of me like you are! You don't know how I feel, Aggie. I've got to begin at the beginning. Aggie, I've been getting fonder and fonder of you for a year. You thought it was business, that I came over just for a few minutes to see your father. It wasn't; it was you. And at last I made up my mind I'd try to marry you. I knew Hull was waiting on you, but I didn't care; you had a right to choose your own beau. And I came and you married me. I knew you had done it as much because I could help out your family as because you liked me; but I hoped you'd get to like me. Sometimes—at first—he turned his black eyes, which were soft and wistful now, for a single glance at her—"it seemed like you were fond of me. Oh, Aggie, couldn't you see how I loved you then? I loved you so much I was 'fraid of you. But I did tell you, sometimes. I was so happy. You see since mother died I never had anybody to love me, and I didn't know how to say things to women folks. Mother thought everything of me, but she never petted me. I used to wish she would. And, of course, I knew lots of men, and I could get along all right with them, if I do get mad and charge around some. But I didn't know how to handle women folks. I used to ask your mother about what things you'd like to have, and then I'd hustle till I got them—"

"You were always generous, Ned; everybody said that," Aggie managed to say.

"But they all said, too, that I had a devil of a temper. That's what's making me fit to kill myself, I'm so d—d miserable—"

"Oh, Ned!"

"Excuse me, Aggie; I didn't mean to swear—"

"Oh, not that, Ned; I meant—I felt sorry."

He halted in his nervous pacing of the floor.

"That's kind of you, Aggie." There was the slightest break before the name as if he had a more tender word in his mind that he did not venture to use, but his wife was too agitated to observe. "Yes, I am as miserable a d—d feller as there is anywhere out of the penitentiary, I guess. You saw that dog awhile ago, and the weight on him, holding him so he couldn't get away, not if I had come at him with my axe—well, Aggie, that's just my fix. I got this temper on me and I can't break away from it. Now, see; I had it when I was a little feller, but I was the only one and ma and pa didn't cure me. Sometimes they got mad at me and gave me a good whipping; but they might have whipped the life out of me before I'd give in. So I guess they

got discouraged; and then pa died and I never crossed ma. I liked her so, and I was a hard worker, so it went on. She humored me, and I didn't often get mad. I truly never got mad at her. But I'd have these fits at other folks and at things. I was like a crazy man in them. Once, when I was a boy, I got mad at another boy, and I beat him so he was sick. He wasn't really very sick, I guess; but I thought he was, and that they'd take me to jail and hang me if he died. I never said a word, but I had my little bundle ready for a week to run away. It didn't matter who it was, when the fit came on, that roused it up. The teacher, he tried to punish me once, and I bit and kicked and somehow got away so I could pull my knife. I'd have stabbed him if he'd tried to touch me. He sent me away from school, but he didn't hit me. That's how I'm so poorly educated. Once it was a horse that maddened me. I ain't often unkind to beasts—not very often—"

"I never saw you mean to anything except Jump," said Aggie.

He looked grateful. "That's good of you to say, Aggie. But once—once I had a balky horse and I got mad. He was worth \$150, but I pulled out a pistol and shot him dead. I was a fool to carry a pistol." He passed his hand over his forehead, tossing away the damp hair. "I'm just like Jump. Aggie. There's a weight I can't get rid of holding me down. I run a little way; I pretend I'm free, but it always drags me down. I ain't a free man. I'm a prisoner!"

"No, you're not, Edward Bruce," cried his wife, rising; "you can conquer yourself if you will."

He was at the window, his back to her, and his answer came in a groan. "I thought I could down it. I thought I was free of the cursed thing. I didn't get mad once those two months. Then—then Mrs. Martin told me about Adam Hull's quarrel with Ella, and how he'd made it up; and it all came over me that was why you married me—you were mad at him. And she spoke of seeing you and Adam at the postoffice, talking a long while, and—I know I'm a fool, but I remembered how you would go to town that mean, drizzly day—"

"But, Ned," interrupted Aggie, "it was to get ma's silk that came by express. Her birthday was the next day, and she'd never had such a splendid present. It just happened I met Adam, and—and—I was thinking he never would have been so good to ma. And I was glad I'd married you."

"And I spoiled it all," groaned the man. "Aggie, I've been in—never mind; that ain't what I set out to say; it was that this morning, when I saw Adam speaking to you, I run away. I didn't dare to stay, for if I'd seen he or you do a thing, like you cared for him, I knew I'd have killed him. I run, Aggie. I went out and chopped wood till I cooled down a little. But, Aggie, what I'm coming at is this: In the worst of it, I wouldn't have hurt you. I'd have killed him if I'd seen you giving him one kind look; but I wouldn't have touched you. And, Aggie—if—if—you don't know how it makes me feel to think that maybe, sometime—when I saw what you were making—O, Ag-

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•DR•

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gie! you don't think, bad as I am, I could be cruel to a little child?"

As he spoke he turned his face to her, and something in it moved his wife as she never had been moved before.

"No, Ned, no!" she cried. He sank down on his knees before her and buried his head in the folds of her dress. His sobs shook him. But she could distinguish the words he whispered between them. "Oh, I've been so mean to you. And I didn't know!"

"Ned, it was my fault as much as yours," she answered. Indeed, in that moment she believed it was, for she had a generous nature. "And don't feel so bad. I'll help you to get rid of—that weight you talk of, and I know I can, for I shall never be afraid of you again."

She was smoothing his hair while at the same time she wiped her own fast-flowing tears away. Such different tears from those that had scorched her cheeks before that day! Even as she spoke he withdrew himself gently from her and stood up a little way off.

"You needn't be afraid, ever, Aggie, dear," he said, "and you needn't be afraid, either, that I'm going to bother you, like I did at first. I'll keep my place."

But his wife, with her eyes shining and a new, divine courage and trust in her heart, came up to him and laid her head on his breast.

"You won't bother," she whispered; "I guess I missed you all the time. And—dear, it will need us both!"

\* \* \* \* \*

Three years later a man, a woman and a very active child were driving along the highway from Ned Bruce's farm to the village. Behind the wagon trotted a fat hound. Presently the man looked back. "I do think Jump's tired," he said, "shan't we let him in?"

"I'm 'fraid he's muddied," said the woman, dubiously. "Ned, you just spoil Jump!"

The man laughed and gave the woman, was young and very pretty, a playful hug with his left arm. "And I spoil Baby, too, you say," said he; "how about you?"

"Oh, every one knows you spoil me!" returned the young woman, deftly removing the arm. "For shame, Ned, the Halls are just behind; how it looks!"

"It looks as if I was a happy man, and I am," returned the man stoutly, patting the cheek of the child, who looked up laughing.

"She got an awful sweet temper," he continued in a graver tone; "she's got her mother's nature and her ways. Aggie, I'm glad."

"I don't know," the wife answered. "Ned, I'd like her to be more like you."

"Temper and all? Aggie Bruce, I heard of the awful whopper you told at the sewing society."

"That you were the best-tempered man I knew?" said Aggie, fondly. "Ned, you are. Do you know, Ned, I wonder sometimes how you did master your temper the way you have."

Ned smiled. "I loved you, Aggie," said he, "and"—touching the rosy little face at his knee—"I loved her. You did it, not me. But"—drawing a deep breath—"it's been a big job and no mistake! And there's plenty left to do, still!"—Octave Thanet.

### Living at Our Best.

Do not try to do a great thing; you may waste all your life waiting for an opportunity which may never come. But since little things are always claiming your attention, do them as they come, from a great motive, for the glory of God, to win his smile of approval, and to do good to men. It is harder to plod on in obscurity acting thus than to stand on the high places of the field, within the view of all, and to do deeds of valor at which rival armies stand still to gaze. But no such act goes without the swift recognition and the ultimate recompense of Christ.

To fulfill faithfully the duties of your station; to use to the uttermost the gifts of your ministry; to bear chafing annoyances and trivial irritation as

martyrs bore the pillory and the stake; to find the one noble trait in people who try to molest you; to put the kindest construction on unkind acts and words; to love with the love of God even the unthankful and evil; to be content to be a fountain in the midst of a wild valley of stones, nourishing a few lichens and wild flowers, or now and again a thirsty sheep; and to do this always, and not for the praise of man, but for the sake of God—this makes a great life.—F. B. Meyer.

### Gems of Thought.

Good nature is the very air of a good mind, the sign of a large and generous soul, and the peculiar soil in which virtue prospers.—Goodman.

Despair makes a despicable figure and is descended from a mean original. It is the offspring of fear, laziness and impatience. It argues a defect of spirit and resolution, and oftentimes of honesty, too. After all, the exercise of this passion is so troublesome that nothing but dint of evidence and demonstration should force it upon us. I would not despair unless I knew the irrevocable decree was passed, I saw my misfortune recorded in the book of fate, and signed and sealed by necessity.—Jeremy Collier.

Men would come into company with ten times the pleasure they do if they were sure of hearing nothing that would shock them, as well as expected what would please them. When we know every person who is spoken of is represented by one who has no ill will, and everything that is mentioned described by one who is apt to set it in the best light, the entertainment must be delicate, because the cook has nothing brought to his hand but what is the most excellent in its kind. Beautiful pictures are the entertainments of pure minds and deformities of the corrupted. It is a degree toward the life of angels when we enjoy conversation wherein there is nothing presented but in its excellence; and a degree toward that of demons, wherein nothing is shown but in its degeneracy.—Sir R. Steele.

Books, while they teach us to respect the interest of others, often make us unmindful of our own; while they instruct the youthful reader to grasp at social happiness he grows miserable in detail; and, attentive to universal harmony, often forgets that he himself has a part to sustain in the concert. I dislike, therefore, the philosopher who describes the inconveniences of life in such pleasing colors that the pupil grows enamored of distress, longs to try the charms of poverty, meets it without dread, nor fears its inconvenience till he severely feels them. A youth who has thus spent his life among books, new to the world, and unacquainted with man but by philosophic information, may be considered as a being whose mind is filled with the vulgar errors of the wise; utterly unqualified for a journey through life, yet confident of his own skill in the direction, he sets out with confidence, blunders on with vanity, and finds himself at last undone.—Goldsmith.

### Fashion Notes.

The box-plaited front for waists is in high favor. It is so very common that for the woman who will have only one or two waists it is wise to select another style.

Sleeves are lightly lined for mid-summer wear, and droop gracefully. Skirts, too, are losing the starched, ungraceful effect that came from too much stiffening. They are still voluminous, but have no longer the wooden folds of recent date.

Fichus and fichu effects are in vogue. Chemisettes and turn-over collars and cuffs are the style for tailor-made gowns. When of linen, they are stiffly starched.

Reefer jackets are popular. They have pocket flaps, and the fronts turn back in revers. Some have large bows and bunches of violets on one side.

### The House Moth.

The housewife needs no telling of the harm that moths will do in the family wardrobe and the house furnishings. She is, however, deeply interested in any proposed remedy, no matter how many times she has failed to keep her treasure intact. From a bulletin of the Vermont experiment station the following suggestions are taken:

If clothing, etc., can be enclosed in perfectly tight paper bags before moths begin to fly and lay their eggs it will be completely protected. Out of doors the moths do not appear before the latter part of May, if before June, in this region, and during the month of June the campaign must be vigorously prosecuted. Articles found infested, or if suspected, may be sprinkled, or better sprayed, with benzine, and this will destroy even the eggs.

If infested closets, drawers, etc., are thoroughly treated with benzine in June there will be no trouble during the remainder of the season. After spraying and airing, articles may be safely wrapped in papers or, if possible, put in bags. A few cents worth of paper bags is worth far more than costly cedar chests or closets. Furniture, carriages or other large articles in constant use are not very likely to be attacked.

If stored they should be covered with paper so completely as to leave no opening for the ingress of the moths. If this cannot be done then a spraying with benzine or bisulphide of carbon early in June, and again in a month or six weeks, should prevent damage. When more convenient cotton cloth may be substituted for paper in covering carriages or other objects.

### Curious Facts.

Galton declares that the patterns on the finger tips are not only unchangeable throughout life, but that the chance of the finger prints of two persons being alike is less than one in sixty-four billions.

A triumph of art over nature was illustrated recently when a well-known English artist made a painting of some old beech trees in a Kent pasture, which he sold for \$1400. The owner of the pasture sold his land and the trees together for \$500, and called it a good sale at that.

One of the most remarkable things about the heart is the amount of work it does. Considering the organ as a pump, whose task it is to deliver a known quantity of blood, against a known "head," it is easy to show that in twenty-four hours a man's heart does about 124 foot tons of work. "In other words," says a contemporary, "if the whole force expended by the heart in twenty-four hours was gathered into one huge stroke, such a power would lift 124 tons one foot from the ground. A similar calculation has been made respecting the amount of work expended by the muscles involved in breathing. In twenty-hours these muscles do about twenty-one foot tons of work."

Jinks—Everybody predicted that Hardhead would have trouble after he married that vain beauty; but she never leaves her home unless he is with her. How does he manage?

Winks—He filled the house with mirrors.—New York Weekly.

"Who knows what the death rate is here?" asked the statistical boarder.

"Why," gurgled the Cheerful Idiot, "anybody ought to know that there is one death apiece for every inhabitant." Indianapolis Journal.

## DOMESTIC ECONOMY.

### Domestic Hints.

**MACARONI WITH TOMATO SAUCE.**—Put one-half of a quart can of tomatoes on to boil, with two sprigs of parsley and a small piece of celery, or a little celery salt and three whole cloves. Fry one tablespoonful of chopped onion in one heaping teaspoonful of butter till yellow, then add a heaping tablespoonful of flour and stir all into the tomato. Season with pepper and salt, and strain into a clean saucepan. Set where it will keep hot but not boil. Put one-fourth of a pound of well-washed macaroni in plenty of boiling salted water. Cover and boil rapidly from twenty to twenty-five minutes, then drain in a colander. Place a layer of the macaroni in a hot dish, then pour over it some of the sauce, then another layer of macaroni and a layer of sauce, having the sauce on the last thing. Set in the oven for five minutes, and serve very hot.

**RYE DROP CAKES.**—Two cups of sour milk, one egg well beaten, one teaspoonful of soda dissolved in boiling water, and enough rye meal to make a batter. Mix together the meal, milk and egg, add the soda and beat thoroughly. Bake immediately in hot buttered gem pans.

**REMNANTS OF ROAST BEEF.**—Take off with a sharp knife all the meat from the bones. If there are a few nice slices reserve them to be eaten cold. Chop the rest fine in a tray. Take cold gravy without the fat and put into a spider to heat. If you have no gravy, some of the stock or water in which meat has been boiled. Season the beef with salt and pepper. When the gravy boils up put in the minced meat, cover it and let it stand upon the fire long enough to heat through thoroughly, then stir in a small piece of butter. Toast some slices of bread, butter lightly, lay them on a hot platter and put the meat over them. The common error in heating over meat sliced or minced is in not carefully removing all gristle and fat, in putting it into a cold spider with too much fat, and cooking it a long time. This makes it oily and tasteless. Almost all meats, when cooked a second time, should be done very quickly. The goodness of these dishes depends much upon their being served hot. Be careful and not use too much gravy; the mince should be moist, but not sloppy.

### Hints to Housekeepers.

It is an easy thing to overdo the pleasures of vacation. An endless round of picnics, dances and the like is as wearing as an endless round of work.

Iron bedsteads take on now many colors, the virgin white in which they were oftenest seen yielding frequently to pale pink or blue or green, as the case may be. White is cold, and the other tints, too, are in harmony with furnishings and draperies when desired.

It is a great saving of time and temper to have a place for wrapping paper and cord. Take a pasteboard box and make a what-not to hang on the wall—one with two pockets—the large one at the bottom for paper and the other for cord. With the aid of paste and pictures they can be made quite pretty.

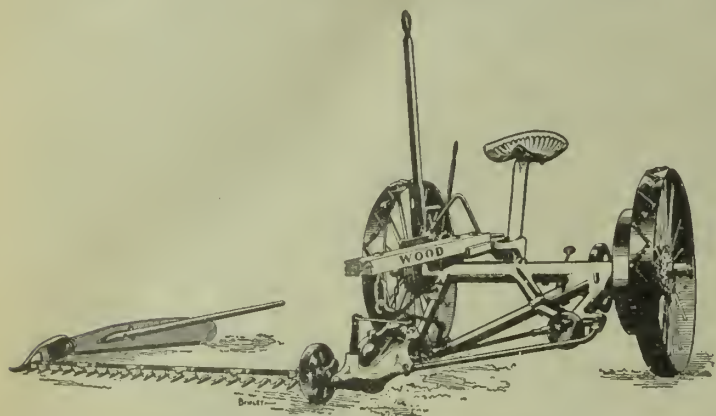
Orange juice served with strawberries, instead of cream, is a pleasant variety, and particularly agreeable to those who find the cream and fruit an unwholesome combination.

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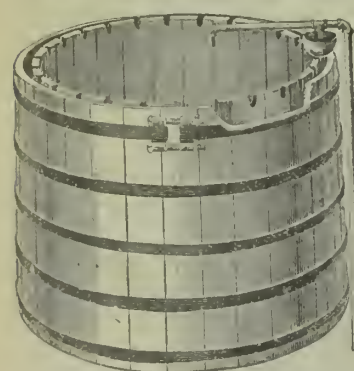
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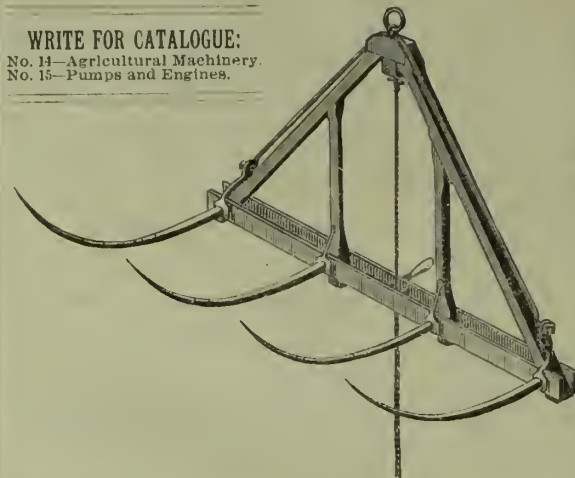
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No. 306,667, Oct. 14, 1884  
No. 403,019, May 7, 1889  
Other patents pending.

The purpose of this notice is to inform both farmers and merchants, who use or sell Horse Forks, that they must not purchase Horse Forks that infringe the above Patents; and to call their attention to the fact that certain horse forks, manufactured by F. E. Myers & Bro., Ashland, O., and imported and sold by the Deere Implement Company, of San Francisco, are direct infringements of the above patents, the manufacturers of the infringing forks having admitted in Court that their forks were an infringement of the above patents, and are now paying royalty for manufacturing and selling, and they have agreed not to sell any west of the Rocky Mountains.

All parties selling or using these infringing Horse Forks will be promptly prosecuted.

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## S. F. MARKET REPORT.

## Market Review.

SAN FRANCISCO, June 19, 1895.

**FLOUR**—We quote: Net cash prices for Family Extras, \$3 50@3 60 ¢ bbl; Bakers' Extras, \$3 40@3 50; Superfine, \$2 35@2 60 ¢ bbl.

**WHEAT**—No. 1 Shipping Wheat is quotable at 92½¢ per cwt for new and 90¢ for old. Milling Wheat, 97½¢@1 ¢ per cwt.

**BARLEY**—Feed, fair to good, 57½¢@60¢; choice, 61½¢; Brewing, 67½¢@75¢.

**OATS**—We quote: Milling, \$1 05@1 10; Surprise, \$1 07½@1 12½; fair feed, \$1 01@1 05; good to choice, 90¢@97½¢; fair to good, 87½¢@90¢; poor to fair, 80¢@85¢; Black, nominal; Gray, 87½¢@95¢ ¢ cwt.

**CORN**—We quote: Large Yellow, \$1 05@1 15; small Yellow, \$1 10@1 17½ ¢ cwt; White, \$1 01@1 05.

**RYE**—Quotable at 87½¢@90¢ ¢ cwt.

**BUCKWHEAT**—Quotable at 85¢@90¢ ¢ cwt.

**CRACKED CORN**—Quotable at \$25@26 ¢ ton.

**CORNMEAL**—Millers quote feed at \$24@25 ¢ ton; fine kinds for the table in large or small packages, 3¢@3½¢ ¢ lb.

**BRAN**—Quotable at \$13 50@14 50 ¢ ton.

**GROUND BARLEY**—Quotable at \$14 50@15 ¢ ton.

**OILCAKE MEAL**—Quotable at \$25 per ton from the mill.

**COTTON SEED OILCAKE**—Quotable at \$24 per ton.

**HAY**—New Wild Oat selling at \$6@8 50; Wheat, \$8@10; Alfalfa, \$6@8 per ton. We quote as follows, old: Wheat, \$7 50@11 50; Wheat and Oat, \$7 50@10 50; Oat, \$8@10; Alfalfa, \$7@8 50; Barley, \$7@8 50; Clover, \$7@8; Compressed, \$8@9 50; Stock, \$5@6 ¢ ton.

**STRAW**—Quotable at 40¢@75¢ ¢ bale.

**BEANS**—We quote as follows: Bayos, \$1 30@1 55; Butter, \$1 75@2 for small and \$2@2 25 for large; Pink, \$1 20@1 45; Red, \$1 30@1 40; Lima, \$1 75@2; Peas, \$2 75@2 95; Small White, \$2 75@2 95; Large White, \$2 60@2 80; Blackeye, \$3@3 25; Horse, \$1 50@1 75 ¢ cwt.

**SEEDS**—We quote as follows: Mustard, Brown, \$1 25@1 75; Yellow, \$1 75@2; Trieste, \$1 90@2 00; Canary, 3¢@3½¢; Hemp, 3½¢; Rape, 1¢@2½¢; Timothy, 5¢@6½¢; Alfalfa, 7¢@7½¢ ¢ lb; Flax, \$2 50@2 75 ¢ cwt.

**POTATOES**—Quotable at 35¢@50¢ ¢ cwt for new crop.

**ONIONS**—Quotable at 65¢ ¢ cwt for red and 75¢ for Silver Skin.

**VARIOUS**—We quote: Summer Squash, 25¢@30¢ for Vacaville; Bay Squash, large box, 50¢; Cucumbers, 65¢@75¢ ¢ box for Marysville; Bay, \$1 50@1 75 ¢ box; Asparagus, 50¢@75¢ ¢ box for ordinary and \$1 01@1 50 for better qualities; Rhubarb, 25¢@50¢ ¢ box; Tomatoes, \$1@1 50 ¢ box; String Beans, 3¢@3½¢ ¢ lb; Refugee, 4¢@4½¢ ¢ lb; Wax Beans, 2½¢@3¢ ¢ lb; Green Peas, 2¢@2½¢ ¢ lb for garden; Turnips, 50¢ ¢ cwt; Beets, 60¢ ¢ sack; Carrots, 40¢@50¢; Cabbage, 65¢@75¢ ¢ cwt; Garlic, new, 45¢ ¢ lb; Cauliflower, 50¢@60¢ ¢ dozen; Dried Peppers, 11¢@12¢ ¢ lb; Dried Okra, 15¢ ¢ lb.

**FRESH FRUIT**—Apples—Quotable at 50¢@75¢ ¢ box for Green and 75¢@1 25 ¢ box for Red. Apricots—Quotable at 35¢@50¢ per box for Royals. Berries—Gooseberries, 2¢@2½¢ ¢ lb; Strawberries, Sharpless, \$2 50@3 ¢ chest; Longworth, \$2@7; Raspberries, \$3@3 50 ¢ chest; Blackberries, \$3@3 50 ¢ chest.

Plums—Quotable at 50¢@75¢. Cherries—Quotable at 40¢@75¢ ¢ box for red and black, and 35¢@50¢ for white; Royal Anne, 65¢@75¢. In bulk, 4¢@4½¢ for black, 4¢@5¢ for white, and 5¢@6¢ for Royal Anne.

Currants—Quotable at \$2@3 50 ¢ chest. Figs—Black, 25¢@35¢ ¢ lb. Peaches—Quotable at 30¢@50¢ in boxes and 25¢@40¢ in baskets.

**CITRUS FRUIT**—We quote: California Navels, \$1 50@2 75; Seedlings, 50¢@1; Mexican Limes, \$4@4 50 ¢ box; California Lemons, 60¢@1 for common and \$2@2 50 for good to choice.

**DRIED FRUIT**—Following are the prices furnished by the San Francisco Fruit Exchange. The figures presented represent carload lots, smaller parcels occasionally selling at slightly lower rates:

Apricots—Fancy Moorpark, 8¢; choice, do, 7¢; fancy, 7¢; choice, 6¢; standard, 5½¢; prime, 5¢. Apples—Evaporated, 4¢@5½¢; sundried, 4¢@4½¢. Peaches—Fancy, 7¢; choice, 5½¢; standard, 5¢; prime, 4½¢; peeled, in boxes, 12¢@13¢.

Pears—Fancy, halves, 5¢; quarters, 4¢; choice, 4¢; standard, 3½¢; prime, 3¢. Dried Grapes—1½¢ ¢ lb.

Plums—Pitted, 3¢@4¢; unpitted, 1¢@2¢. Prunes—Four sizes, 4¢. Nectarines—Fancy, 6¢; choice, 5½¢; standard, 5¢; prime, 4¢.

Figs—White, choice, 3¢@5¢; black, choice, 2½¢@3¢. Raisins—In sacks (50-lb. boxes selling at ¼¢ ¢ lb. higher): 4-crown, loose, 3½¢; 3-crown, 2½¢; 2-crown, 2¢; seedless Sultanias, 3¢; seedless Muscates, 2¢ ¢ lb; 3-crown London Layers, \$1 40 ¢ box in 20-lb. boxes; clusters, \$2; Dehesa clusters, \$2 50; Imperial clusters, \$3; 4-crown, loose, \$1; 4-crown, loose, faced, \$1 15 ¢ box.

**NUTS**—Chestnuts, 3¢@5¢; Walnuts, 6¢@7¢ for hard shell, 7¢@9¢ for soft shell and 7¢@9¢ for paper shell; California Almonds, 9¢@10¢ for soft shell, 2¢@2½¢ for hard shell and 6¢@7¢ for paper shell; Pecans, 3¢@4¢ for California and 4¢@5¢ for Eastern; Pecans, 6¢ for rough and 8¢ for polished; Brazil Nuts, 7¢@7½¢ ¢ lb; Cocoanuts, \$4 50@5 50 ¢ 100; Pine Nuts, 20¢ ¢ lb.

**HONEY**—We quote: Comb, 9¢@10¢; water-white, extracted, 5½¢@6¢; light amber, extracted, 5¢@5½¢; dark amber, 4¢@5¢ ¢ lb.

**BEEWAX**—Quotable at 26¢@28¢ ¢ lb.

**BUTTER**—Creamery—Fancy, 14¢; seconds, 12½¢@13¢ ¢ lb.

Dairy—Fancy, 11¢@12¢; fair to choice, 10¢@11¢; store lots, nominal.

**CHEESE**—We quote: Choice to fancy, 6¢@7¢; fair to good, 4¢@5¢; Eastern, 12½¢@13¢ ¢ lb.

**EGGS**—Quotable at 14¢@16¢ ¢ dozen for store and 17¢@18¢ for ranch.

**POULTRY**—We quote as follows: Live Turkeys—Gobblers, 12¢; Hens, 10¢@11¢ ¢ lb; Roosters, \$4 50@5 for old, and \$7@9 for young; Broilers, \$2 50@3 for small and \$3@4 for large; Fryers, \$4@5; Hens, \$4 50@5; Ducks, \$3@4 for old and \$4@5 for young; Geese, \$1@1 25 ¢ pair; Goslings, \$1 25@1 50; Pigeons, \$1 75@2 ¢ dozen for old and \$1 50@2 for young.

**WOOL**—We quote spring: Year's fleece, San Joaquin, \$3 ¢ lb.....6¢@6½¢ 6 to 8 months do.....5¢@8¢ 6 to 8 months Calaveras and foothill, free.....8¢@10¢ Do, defective.....4¢@6¢ Northern, good to choice.....9¢@12¢ Do, defective.....7¢@9¢

We quote Nevada spring: Light and choice.....8¢@10¢ Heavy.....6¢@7¢

**HOPS**—Quotable at 4¢@6¢ ¢ lb.

**HIDES AND SKINS**—Quotable as follows: Sound. Culls. Heavy Steers, 56 lbs up, ½ lb.....10 @-c 9 @- Medium Steers, 48 to 56 lbs.....8½@9 7½@8 Light, 42 to 47 pounds.....8 @- 7 @- Cows, over 50 lbs.....8 @8½ 7 @- Light Cows, 30 to 50 lbs.....8 @- 7 @- Stags.....@6 @4 Kips, 17 to 30 lbs.....@7 @6 Veal Skins, 10 to 17 lbs.....@8 @6 Calf skins, 5 to 10 lbs.....@9 @7 Dry Hides, over 16 lbs.....19 @20 14 @- Dry Kips and Veal, 11 to 16 lbs.....14 @15 10 @- Dry Calf, under 4 lbs.....@20 14 @-

Pelts, Shearings, 10¢@20¢ each; do, short, 25¢@35¢ each; do, medium, 30¢@45¢ each; do, long wool, 40¢@60¢ each; Deer Skins, summer, 30¢; do, good medium, 15¢@25¢; do, winter, 10¢@15¢ ¢ lb; Goat Skins, 20¢@35¢ apiece for prime to perfect, 10¢@20¢ for damaged, and 5¢ each for Kids.

## California Fruit Sales.

CHICAGO, ILL., June 18.—The National Fruit Association sold: Alexander peaches, 70¢@90¢; Royal apricots, 80¢@95¢; K. C. plums, \$1.15; cherry plums, poor condition, 50¢; Clyman plums, \$1.60@1.70; Astrachan apples, \$1.25.

The Earl Fruit Company sold: Clyman plums, \$1.70; Royal apricots, 85¢@1.15; Alexander peaches, 70¢@1.10.

Porter Brothers Company sold at open auction to-day: Tragedy prunes, \$3.50; Burbank plums, \$3.10; Royal Hatives, \$1.75; St. Catherine, \$1.75; Clymans, \$1.65; cherry plums, \$1.35 and in boxes 55¢@60¢; Bigarreau cherries, \$1.25@1.55; Royal Annes, \$1.20@1.50; Tartarians, 65¢@1.40; Royal apricots, 95¢@1.15; peaches, 50¢@90¢.

NEW YORK, N. Y., June 18.—The Earl Fruit Company sold: Royal apricots, \$1.15@1.35; cherry plums, \$1.30; Alexander peaches, 70¢@1.15; Garland peaches, 75¢@90¢.

The National Fruit Association: Black Oregon cherries, \$1.30@1.60; Royal Annes, \$1.15@1.55; Alexander peaches, 75¢@1.30; Royal apricots, 80¢@1.15; Newcastle apricots, 55¢.

Porter Brothers Company sold at open auction to-day: Tragedy prunes, \$4.15; cherry plums, \$2.40; Clymans, \$1.40@2.10; Brills, \$1.95; Montgamet apricots, \$2.40; Royals, \$1.25@2.25; Alexander peaches, 60¢@1.75.

## Beet Sugar Bounty in Germany to Be Continued.

WASHINGTON, June 16.—Consul Muth at Magdeburg has sent to the State Department a report on the preliminary sugar law of Germany. He says the German Government has come to the relief of the beet sugar industry by submitting to the Reichstag a preliminary law which provides that until July 1, 1899, the rate of export bounty now in force shall continue. Under the sugar law of 1891 the rates would have been reduced after August 1, 1895, and after August, 1897, the export bounty was to have been discontinued. Germany, he says, now pays a lower export bounty than any competing country, and the reduction has been suicidal. The country is now in a deplorable state, and nothing will save it from serious loss unless growth and unnatural extension are checked. The preliminary law continuing the present bounty will enable the Government to thoroughly consider the sugar question. A new law will then be submitted which will answer various demands of the local interests through the empire.

## List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING JUNE 4, 1895.

540,568.—FLUME GATE—N. S. Abrahamson, Redlands, Cal.

540,569.—ELECTRIC RAILWAY—C. M. Allen, S. F.

540,532.—DOOR BOLT—J. E. Armstrong, Santa Cruz, Cal.

540,380.—BARREL HEAD—Burroughs & Roberts, Santa Cruz, Cal.

540,237.—AIR COOLER—J. R. Cook, Pioche, Nev.

540,539.—BRAKE PIPE DRAIN CUP—W. K. Connors, Sacramento, Cal.

540,434.—CAMERA STAND—A. W. Gilfillan, Ferndale, Cal.

540,357.—SAWMILL—D. B. Hanson, S. F.

540,548.—STOVE UTENSIL—F. G. High, S. F.

540,540.—BLEACHING GLUE—J. E. Kunitz, Santa Cruz, Cal.

540,502.—EGG CASE—Leak, Hayford, Merguire & Radegsky, S. F.

540,395.—NEEDLE—Levy & Lindow, S. F.

540,505.—FUEL GAS RETORT—John Martin, Berkeley, Cal.

540,329.—SAW GAUGE—J. Morin, Mt. Vernon, Wash.

540,548.—LOCK NUT—C. G. Mortenson, Lorin, Cal.

540,386.—CAN-HEADING MACHINE—H. Schaaek, S. F.

540,551.—MITER—J. M. Schofield, Madera, Cal.

540,603.—GAS REGULATOR—E. J. Verrue, S. F.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible by mail or telegraphic order. American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

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## Breeders' Directory.

Six lines or less in this directory at 50¢ per line per month.

## Horses and Cattle.

F. H. BURKE, 626 Market St., S. F. All Prize Horses; Grade Milch Cows. Fine Pigs.

BULLS—Devons and Shorthorns. All pure bred and registered. Fine individuals. At prices to suit the times either singly or in carload lots. Oakwood Park Stock Farm, Danville, Cal.

P. H. MURPHY, Perkins, Sac. Co., Cal. Breeder of Shorthorn Cattle, Poland-China & Berkshire Hogs.

M. D. HOPKINS, Petaluma, Cal. Registered Shorthorn Cattle. Both sexes for sale.

PETER SANE & SON, Lick House, S. F., Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs. Correspondence solicited.

JERSEYS—The best A. J. C. C. registered prize herd is owned by Henry Pierce, S. F. Animals for sale.

## Poultry.

BUFF LEGHORNS.—Eggs from prize winners, \$1, \$2 and \$3 per thirteen. Incubator lots at reduced rates. C. W. Hansen, San Mateo, Cal.

EGGS FOR HATCHING—Buff, Brown and White Leghorns, Plymouth Rocks, White Wyandottes, Silver Wyandottes, Light Brahmas, Indian Games, Black Spanish, Bantams, Pekin Ducks—Two Dollars setting. Mammoth Bronze Turkey, White Holland Turkey—Three Dollars dozen, Theodore Cushing, Spokane, Washington.

J. R. CATLETT, Pleasant Grove, Cal., breeds only S. C. Brown Leghorns. Eggs for hatching, 50¢ per setting or 11 settings for \$5. Satisfaction guaranteed.

WELLINGTON'S IMPROVED EGG FOOD for poultry. Every grocer and merchant keeps it.

CALIFORNIA POULTRY FARM, Stockton, Cal. Send for illustrated and descriptive catalogue, free.

## Swine.

F. H. BURKE, 626 Market St., S. F.—BERKSHIRES.

CHAS. A. STOWE, Stockton, Berkshire and Poland-China Hogs.

M. MILLER, Eliso, Cal. Registered Berkshires.

J. P. ASHLEY, Linden, San Joaquin Co., Cal. Breeds Poland-China, Essex and Yorkshire Swine.

TYLER BEACH, San Jose, Cal. Breeder of Thoroughbred Berkshire and Essex Hogs.

## Sheep and Goats.

J. B. HOYT, Bird's Landing, Cal. Importer and Breeder of Shropshire Sheep; also breeds Cross-bred Merino and Shropshire Sheep. Rams for sale. Prices to suit the times. Correspondence solicited.

J. H. GLIDE, Sacramento. Very large choice Spanish, French and Shropshire rams. Bedrock prices.

R. H. CRANE, Petaluma, Cal. Southdown Sheep.

## Short-Horn BULLS FOR SALE.

## ROBERT ASHBURNER,

Baden Station, San Mateo Co., Cal.

The Baden Farm Herd was established in 1867, with cows from then recent importations of the best English Milking Shorthorns, since which time improvement in dairy qualities has been steadily kept in view.

## FOR SALE. Holstein BULLS Friesian BULLS

I have for sale 10 Thoroughbred Holstein-Friesian Bulls of superior breeding—Clothilde, Netherland, Angie and Lady Fay families, ranging in age from 6 to 18 months. Apply

HALL'S STOCK FARM, Marysville, Or. THOS. B. HALL, Sacramento.



## 1000 SHROPSHIRE.

Largest Mutton Ram Breeding Farm in America.

Range trade a specialty. Also fitted show stock in season.

Come or write—

A. O. FOX, Owner, Oregon, Dane Co., Wis.

## SESSIONS &amp; CO.,

## Lynwood Dairy and Stock Farm

P. O. Box 686, Los Angeles, Cal.

We have Berkshires of the most fashionable strains. They are from Prize Winners and are Prize Winners themselves. We can furnish pigs three to six months old. Correspondence solicited.

## POULTRY KEEPERS CAN YOU AFFORD

SEND YOUR NAME & ADDRESS ON POSTAL CARD TO LE GRAND POULTRY RANCH, WEST RIVERSIDE, CAL. THEY WILL SEND YOU SOMETHING USEFUL BY DECEMBER 15TH NEXT. GET THE NEW LEGRANDS.



## IN THESE TIMES

You Can Largely Increase

Your income by buying an Incubator and engaging in the chicken business. Send stamp for our catalogue of Incubators, Wire Netting, Blooded Fowls and Poultry Appliances generally. Remember the Best is the Cheapest. PACIFIC INCUBATOR CO., 1317 Castro St., Oakland, Cal.

## MOORE, FERGUSON &amp; CO. WOOL, GRAIN, FLOUR

General Commission Merchants, 310 CALIFORNIA ST., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

## SAMPLE American Bee Journal.

(Established 1861).

Weekly, \$1 a year. 7 Editors.

160-page Bee-Book Free!

All about Bees and Honey

G. W. YORK & CO.

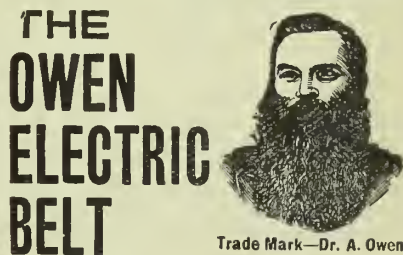
56 Fifth Ave. CHICAGO, ILLINOIS.

## BEEKEEPERS SEND FOR

CLEANINGS IN BEE CULTURE.

A Handsomely Illustrated Magazine, and Catalog of BEE SUPPLIES.

FREE. THE A. I. ROOT CO., Medina, O.



Trade Mark—Dr. A. Owen

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The latest and only scientific and practical Electric Belt made, for general use, producing a genuine current of Electricity, for the cure of disease, that can be readily felt and regulated both in quantity and power, and applied to any part of the body. It can be worn at any time during working hours or sleep, and

## WILL POSITIVELY CURE

RHEUMATISM LUMBAGO GENERAL DEBILITY LAME BACK NERVOUS DISEASES CHRONIC DISEASES AND FUNCTIONAL DERANGEMENTS

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Electricity, properly applied, is fast taking the place of drugs for all Nervous, Rheumatic, Kidney and Urinal Troubles, and will effect cures in seemingly hopeless cases where every other known means has failed.

Any sluggish, weak or diseased organ may by this means be roused to healthy activity before it is too late.

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Contains fullest information regarding the cure of acute, chronic and nervous diseases, prices, and how to order, in English, German, Swedish and Norwegian languages, will be mailed, upon application, to any address for 6 cents postage.

## The Owen Electric Belt and Appliance Co.

MAIN OFFICE AND ONLY FACTORY, The Owen Electric Belt Bldg., 201 to 211 State Street, CHICAGO, ILL.

The Largest Electric Belt Establishment in the World

MENTION THIS PAPER.

## HEALD'S

Business College,



## Defense of the Co-operative Buying System.

(Continued from page 393.)

sumers of our products. Their teas are brought from Japan or China direct. They patronize drummers largely from the Eastern houses, thus cutting out the city middleman, our customer for butter, eggs, etc. But we, forsooth, must pay tribute to them. "What is sauce for the goose must not be in their case sauce for the gander."

Is this tribute—profit or whatever name you give it—any more available in the trader's pocket for assessment to carry on the country government than the same amount in the pockets of the "horny handed sons of toil"? Are they any more liberal in giving to churches, schools, etc., than the Grangers would be if this extra amount were in their own pockets?

Again, does it not stand to reason that if the money drawn from the agricultural producers to build up the towns was disseminated among the farming community they would be by that much more prosperous?; hence agriculture, being more prosperous, would draw to her ranks enough more votaries to fully reimburse her for the loss of any urban population.

Rest assured, brother, that there will always exist as much town in any community as the business calls for. There will not be a dearth of that kind where there is a call for it.

We often hear it asserted that by the time we pay freight from below it will counterbalance any apparent profit. Does not the home merchant pay freight, too? I have bought as much as \$400 worth of miscellaneous groceries, on which the freight never reached over \$3.50 on the whole amount, or less than one thousandth of one percent.

A. P. MARTIN.

## Tulare Grange.

The regular semi-monthly meeting of Tulare Grange was held to-day—15th inst. After the regular business of the Grange was performed the Worthy Lecturer called attention to the address of J. H. Brigham, Worthy Master of the National Grange, and on request read the same. It was unanimously admitted that the address was timely and what was said was well said.

A committee consisting of Sisters Ingham, Fowler and Gill was appointed to draw up resolutions of respect and regret on the death of Sister Adler, our late Worthy Chaplain.

The Lady Assistant Steward, Sister Gill, was requested to provide a question-box, to be kept in the Grange locker and brought out at each meeting, when every member will be requested to put in some question for consideration and discussion at some subsequent meeting.

It was resolved that one meeting in every three months should be set apart and known as Sisters' Day, under special management of the sisters, and that Ceres, Pomona and Flora provide for the same and preside thereat.

It was resolved to hold a special meeting on Wednesday, the 19th, for work in the degrees.

The following preamble and resolutions were introduced, considered, approved and passed:

WHEREAS, This Grange being informed that Labor Commissioner Fitzgerald is about to establish a central office, intended to furnish farmers, orchardists and others of kindred agricultural pursuits with farm laborers, other than Asiatic, under rules which will provide alike for fair wages and fair hours of work for the laborer and fair, reliable, attentive work for the employer; therefore be it

Resolved, That Tulare Grange, No. 198, P. of H. of Cal., hereby endorses and commends this effort of Labor Commissioner Fitzgerald, pledges its support to the same and recommends similar support by all Patrons of Husbandry in California; and

Resolved, That the sympathies of this Grange are with the laborers of our kindred, our nationality and our civilization; their interests are ours and we earnestly desire their well doing. To this end we commend to their observance that most excellent advice of Cardinal Gibbons: "Take an active, personal, conscientious interest in the business of your employer, and the more you contribute to its success the better he can afford to compensate you for your services. He will requite you with a generous hand."

Resolved, That the Secretary send a copy of

these resolutions, with the seal of the Grange attached, to Labor Commissioner Fitzgerald.

In considering the subject, it was admitted that there were many among the laboring class who cannot resist the temptation to squander their earnings when they get them, and it was thought that legislation (if such a thing could be made practicable) which would provide for a percentage of earnings of labor being withheld and kept in a Government savings department and afterwards to be used for the benefit of the laborer in providing him a home or for his wants in sickness or in times when employment fails—such legislation must produce great benefits.

It was suggested that hops would do well here and be a new industry. The meeting was a remarkably pleasant one.

J. T.

## \$100 Reward, \$100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers that they offer One Hundred Dollars for any case that it fails to cure. Send for list of Testimonials.

Address F. J. CHENEY & CO., Toledo, O.  
Sold by Druggists, 75c.

## Windmills.

R. F. Wilson, of Stockton, Cal., has had such excellent success with his 8, 10 and 12-foot Hercules windmills that he is now preparing the patterns for a 6-foot windmill. This size will furnish sufficient water for one family, and will be found just the thing for a stock windmill.

He says that a farmer can irrigate from ten to fifteen acres of alfalfa with his irrigation mill in connection with two of his latest improved irrigation pumps. The whole outfit will cost about \$200. Parties in need of pumps, and especially deep-well pumps, will do well to correspond with him and get prices. His patent non-shrinkable tanks are very successful and are cheap. Address R. F. Wilson, Stockton, Cal.; office, 17 N. Commerce St.; works, cor. Main and Lincoln.

## Horse Owners! Try GOMBAULT'S Caustic Balsam

A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all Unctions or Blistering for Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

## CHOICE FRUIT ORCHARD.

Will be sold cheap: near Los Gatos; 40 acres; the best laid out and best cared for orchard (three years old) in Santa Clara Valley; prunes, peaches, pears and almonds.

New House, 8 rooms, lot 50x112½, town Palo Alto, \$1700. Also some choice building lots in the town.

JOHN F. BYNBE, No. 42 Market St., San Francisco.

## DIVIDEND NOTICE.

SAN FRANCISCO SAVINGS UNION, 532 California St., Cor. Webb.

For the half year ending with the 30th of June, 1895, a dividend has been declared at the rate per annum of four and eight-tenths (4 8-10) per cent on Term Deposits, and four (4) per cent on Ordinary Deposits, free of taxes, payable on and after MONDAY, the 1st of July, 1895.

LOVELL WHITE, Cashier.

## DIVIDEND NOTICE.

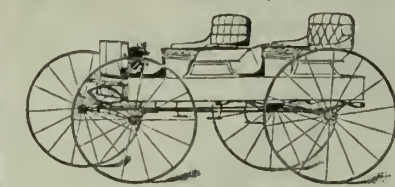
The German Savings and Loan Society, 526 California St.

For the half year ending June 30, 1895, a dividend has been declared at the rate of four and eight-tenths (4 8-10) per cent per annum on Term Deposits, and four (4) per cent per annum on Ordinary Deposits, free of taxes, payable on and after MONDAY, July 1, 1895.

GEO. TOURNY, Secretary.

**STUMP PULLERS**  
HOOKER & CO.  
16 & 18 DRUMM ST. S.F.

## VEHICLES 50% HARNESS ALL KINDS. SAVED. ALL KINDS.



No. 600. Price \$65.

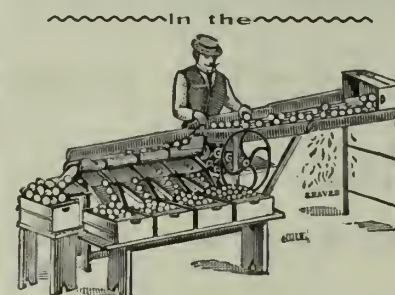
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| Top Buggies           | \$75 to \$125 |
| Road Wagons           | 45 to 60      |
| Two Seat Wagons       | 45 to 110     |
| Phaetons              | 100 to 150    |
| Surries and Carriages | 125 to 200    |
| Harness               | 8 to 35       |

WE SHIP EVERYWHERE.

Send 2c stamp for Catalogue or call.

CALIFORNIA WAGON AND CARRIAGE CO.,  
36½ FREMONT ST., SAN FRANCISCO.

## Fruit Graded



## California \* Fruit \* Grader.

### RIDES ON RUBBER BELTS

Which carry it along smoothly until, reaching the proper space, it slides into the boxes waiting to receive it. The roller revolves the fruit gently until it is perfectly assorted, according to size. No longer dependent upon gravitation, which is the case with other Graders, and which necessarily results in injury and bruising of the fruit.

Grades Citrus or Deciduous Fruits of all kinds, including Oranges, Lemons, Limes, Apples, Pears, Peaches, Plums, Prunes, Apricots, Cherries and Grapes.

SAN JOSE, August 9, 1894.

We are now over the rush of apricots, and we have graded with the California Grader you sent us 50 tons per day, much to our surprise and pleasure. It grades much closer and more rapidly than a Grader of another make which we are using beside it, and its work is beyond comparison with that of a more costly and complicated machine which we have been using heretofore.

Very truly yours,

START & MORRISON, Packers and Cannery.

Increased Manufacturing Facilities Enabling Corresponding Reduction in Cost, We are Giving Our Purchasers the Benefit.

Write for Descriptive Circular and Price List.

## G. G. Wickson & Co.

MANUFACTURERS.

3 and 5 Front St., San Francisco,

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GEARED WINDMILL.

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WINDMILL.

Patent Non-Shrinkable Tanks,

Deep-Well Pumps,

All Kinds of Pumps.

Do not buy an Eastern machine when you can get a better article made at home for less money.

The Board of Supervisors of San Joaquin county are using about twenty of my windmills for road sprinkling.

Write for Prices.

R. F. WILSON—DEAR SIR:—You sold me in 1892 two windmills (the Hercules): one at Fowler, Fresno Co., and one at Antelope Valley, Tulare Co. They have been in constant use ever since and not a dollar of expense thus far. When a mechanic builds a meritorious machine, I think it proper he should receive credit. Yours truly,

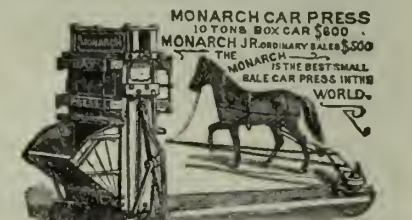
JUDGE S. J. NYE, Oakland.

R. F. WILSON,  
STOCKTON, CAL.

Works Office, Cor. W. Main and Lincoln Sts.  
17 N. Commerce St.



OUR ELECTRIC BELTS CURE Kidney Troubles, Rheumatism, General Debility, etc. Circulars Free. Want Agents. Address E. TAYLOR & CO., Cleveland, Ohio.



## Monarch and Junior Monarch HAY PRESS.

Patented by Jacob Price

—ALSO—

## Double-End HURRICANE Press

(Two Sizes).

—FOR SALE BY—

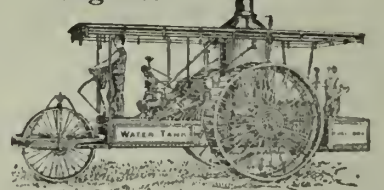
L. C. MOREHOUSE,

SAN LEANDRO, CAL.

Wm. H. GRAY

General Agent.

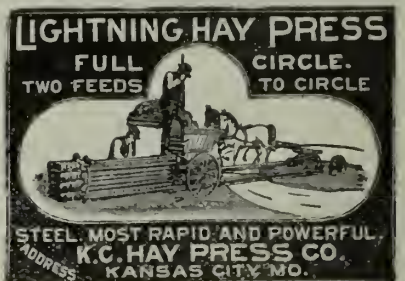
## Price's Traction Engine.



We have one of these engines that was used about one month last season and was taken back by us by reason of illness of purchaser. Engine is in perfect order, and in better working order than when first sent from the factory. A BARGAIN. Indicated power, 80-horse; Cylinders, 8x8; Wheels, 8 ft. high, 28 in. wide; weight, less than 10 tons. Price when new, \$4500.

HOOKER & CO.,

16 and 18 Drumm Street, San Francisco.



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512 to 516 Sacramento St., San Francisco, Cal.

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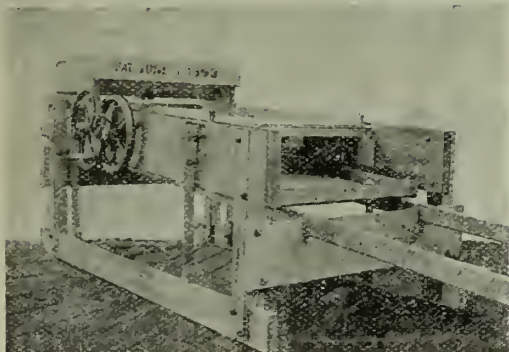
LIGHTNING WELL MACHINERY Works. Largest of tools. Fortune for the driller by using our Adamantine process, can take a core. Perfected Economical Artesian Pumping Rig to work by Steam, Air, etc. Let us help you. THE AMERICAN WELL WORKS, Aurora, Ill. Chicago, Ill. Dallas, Tex.

## FAT FOLKS

using "ANTI-CORPULENT PILLS" lose 15 lbs. 8 months. Cause no sickness, contain no poison and never fail. Sold by Druggists everywhere or sent by mail. Particulars (sealed) 4c. WILCOX SPECIFIC CO. Phila. Pa.



# THE BURRELL PRUNE MACHINE.



A New Process for Cutting the Skins of Prunes.

NO FIRE; NO HOT WATER; NO LYE.  
Cleans, Cuts and Spreads the fruit at one operation.

SIMPLE, STRONG, DURABLE, CHEAPER AND BETTER.

Letters from Persons who have used the Burrell Prune Machine:

OAK BLUFF, SANTA CRUZ CO., CAL., April 15, 1895.  
MR. BURRELL—Dear Sir: Allow me to say that your pricker has given me more than satisfaction in its work, being a great improvement on the old method of dipping, both in the greater amount of work done in a given time, and the facility with which it is done. And I feel assured that where there is a large quantity of prunes to be handled, it will pay for itself in a very short time, as well as leaving the prune in a far more healthy condition; it not having been treated with lye. Wishing you every success with your really valuable invention, I remain, Respectfully yours, ROBT. MOORE.

San Jose, April 30, 1895.  
MR. J. B. BURRELL—We have, during the past season, received many lots of "pricked" prunes. They have in all instances been mingled with dipped prunes and no distinction made. SANTA CLARA COUNTY FRUIT EXCHANGE, by PHIL HERSEY, Manager.

PORTERVILLE, Feb. 1, 1895.  
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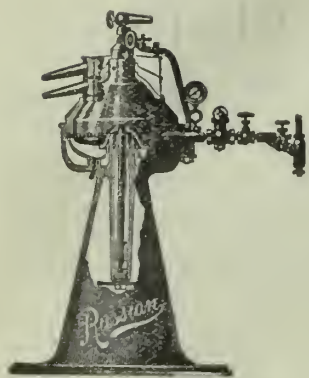
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One large and two small nets used for each wagon. Parties having boxes longer than 16 feet should order two nets for each box.

In ordering nets, send inside length of box, and state whether one or two nets are required for each.

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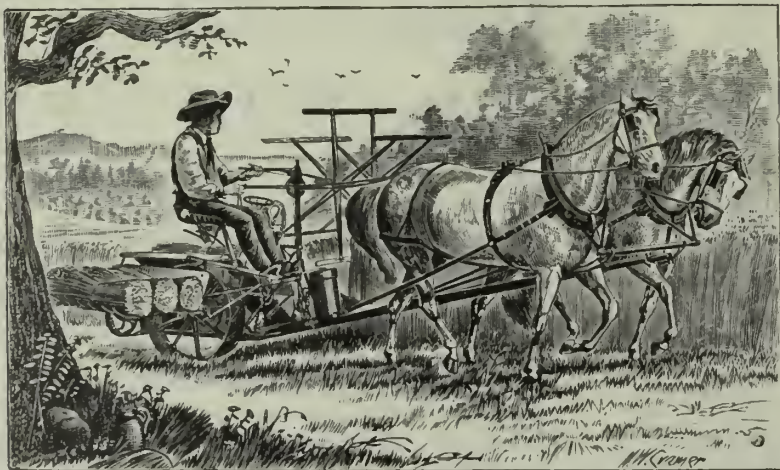
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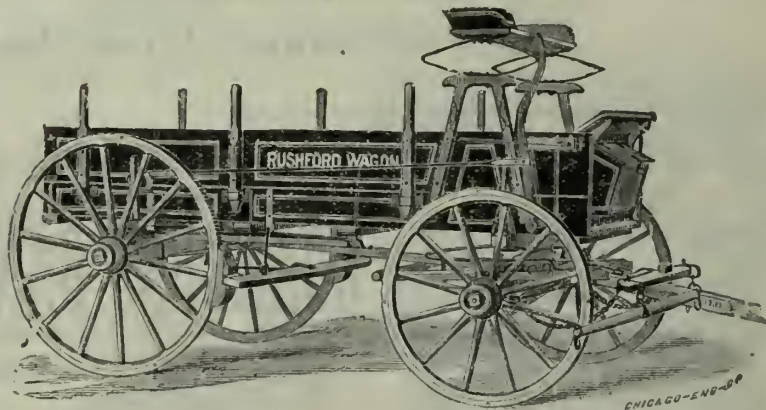
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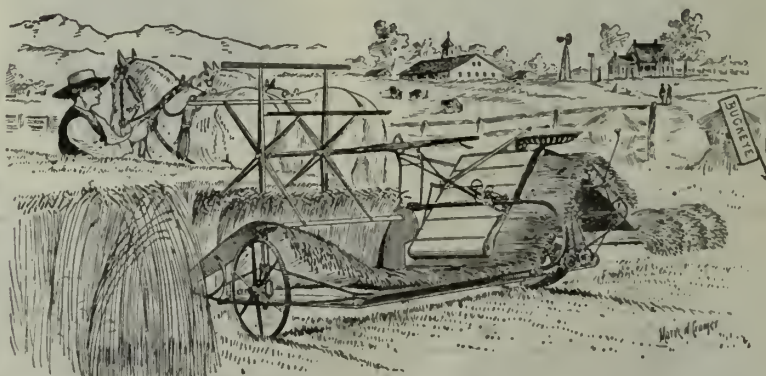
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# THE PACIFIC RURAL PRESS

AND CALIFORNIA FRUIT BULLETIN.

Vol. XLIX. No. 26.

SAN FRANCISCO, SATURDAY, JUNE 29, 1895.

TWENTY-FIFTH YEAR.  
Office, 220 Market Street.

## In the Shasta Region.

The outing season is at its height. The society journals proclaim the emptiness of town and city mansions and even the common metropolitan man meets plenty of indications that the people are not here. Every sea beach and stream side and mountain top has now its maximum population and the summer-boarder crop is being carefully gathered in.

The Shasta region, which has gained wonderfully in popular esteem, has this year collected a greater throng than ever before. The great hotels, the camp grounds, the old-fashioned resorts which sufficed for all before Shasta became accessible—all are well filled this year. It matters little how popular it becomes or how freely sought for, the region is one of infinite variety which cannot stale and of capacity beyond enumeration.

The focus of all rays of interest in the Shasta region is, of course, the grand old mountain itself, rising 14,400 feet above the sea, and showing its snow crest for hundreds of miles. We have had several views of the mountain in past years, and on this page is a nearer one than any heretofore given. It is taken from a point which is itself at considerable elevation, so the great altitude of the peak does not appear. Another view shows the trail by which the perpetual snows are approached, and the lower picture represents the start on the upward journey from the lower valley. To those who cannot traverse the scenes, perhaps the picture will bring some slight consolation, and carry the

## Activity Among Cannerys.

The fruit cannerys are taking hold of this season's work with much force. Orders have been received to a considerably greater volume than for the past two years, prices are advanced and there is no old stock to speak of to stand in the way of the new pack. The reduced price of tin plate is said to be about \$5 or \$6 per thousand cans. Cannerys are now freely buying fruit at considerably higher rates than

July 20th, when we shall employ from six to eight hundred hands."

We are quite willing the cannery should indulge his croaking on the silver and wheat questions, providing he runs his establishment with a full force of operatives. If a man works well he has perhaps a right to growl.

## Wheat Outlook.

Prospects for better wheat prices are brightening. The lessened local crop, through the injury by hot winds, is only one point in the strengthening of the situation. The release of the Fair wheat still relieves the market, and the promised resumption of large scale milling does much to give all operators confidence. The *Call* says: "The good feeling of better times coming is not confined to the growers. Among the millers and grain manipulators of the city mart there is an exuberant tendency, which augurs well for the future of the wheat market. In fact, on 'Change yesterday there was little hesitation among brokers and others in admitting that a mild boom is coming all along the line."

Naturally activity among the millers will do much to instill confidence, and this activity is based upon a decided improvement in the local milling situation. The Starr Mills at South Vallejo are now at work again. There are two large mills included in the plant, and George W. McNear stated to a

reporter that one of the mills would be run to its full capacity and the other would turn out all that was needed over that until the new wheat



MOUNT SHASTA FROM AN ADJACENT ELEVATION.

they paid last year—in fact, higher price of fruit does not appall them. With an active demand for their product, it does not matter much what the



THE TRAIL TO THE SUMMIT OF THE MOUNTAIN.



STARTING OUT TO MOUNT SHASTA.

thought along paths which the feet cannot press.

G. H. APPEL, agent for the California Transportation Company, tells a reporter that the company was perfecting arrangements to begin shipping fresh fruit from Sacramento to London about July 1st. Reports from London, he says, are favorable to the enterprise, and the prospect is excellent for good prices. We hope the experiment will be kept up, though it seems rather a poor year to send fruit abroad. The local demand bids fair to cover it all this year, but there will be years when we can furnish any quantity.

It is reported that the lima bean growers of the Ventura region are discussing the project of forming a combine to keep up bean prices, an undertaking which it is claimed they might easily compass as they control the situation.

fruit costs—within reasonable limits, of course. It is when the situation is bad that the price of fruit is a strong factor. It is then with all composure that cannerys are paying twice as much for cherries and apricots as they paid last year, and it looks as though they would have to keep up that rate all through the rest of the fruits that they want, excepting perhaps the peaches. The cannerys are satisfied with the quality of the fruit they are receiving and the labor supply is ample. The establishments ought to make a good year of it. Of the trade aspect of canning at present, one cannery says:

"As a whole the outlook is better than it was for the last two years, provided people are not carried away by the fair prospects and indulge in an overpack. The home trade is not buying. Eastern buyers are ordering about half of what they bought in 1893, while the English demand is better than it was in '94. Our market depends greatly on the mining and manufacturing districts of the United States. The depression in silver and grain has greatly diminished the purchasing power of Utah, Colorado, Idaho, Montana, Oregon and Washington. We expect to work with a full force, beginning about

came in, when it, too, would be run to its full extent.

"The prospects for the coming year I consider exceptionally good," said Mr. McNear in speaking of the starting up of his mill, "especially in the flour trade. Everything points that way now. The market just now is in a most advantageous condition for the millers of this State. Heretofore the millers in the middle West have had the best of us. They have had better shipping rates, and as competitors we were getting the worst of it. Now with wheat at its present advanced price in the East we are in a splendid condition to hold our own. Contracts have already been made at good prices and others will come. Shipping will be resumed by the Horn route. On account of the Eastern competition this mode of shipment was abandoned last year, but now it will boom again."

This is certainly good news to the wheat growers if its facts and philosophy are sound.



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Registered at S. F. Postoffice as second-class mail matter.

ALFRED HOLMAN.....Editor.  
E. J. WICKSON.....Special Contributor.

San Francisco, June 29, 1895.

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## The Week.

### Road Commission.

The State Road Commissioners, Messrs. Irvine, Manson and Maude, are on their travels this week in the Sacramento valley counties, examining chuck holes and testing dust, and consulting with county supervisors about the same. The commissioners will learn more about California bad roads in a few days than they can forget in a lifetime; and they will not let the State forget it either. They will do much, no doubt, to wake up the people on this important subject. On their trip to the Yosemite Valley the commissioners had a camera with them, and took photographs of various spots along the roads that might be of service to them latter on, also of places of interest. Regarding the rock-crushing plant at Folsom Prison, the commissioners say they have obtained a proposition for freight rates from the Southern Pacific Company, but do not feel at liberty to make the figures public until they shall have been submitted to Governor Budd. If approved by him, steps will at once be taken to put the rock-crusher into operation by calling for bids for that purpose.

### Entries Reduced.

The State Board of Agriculture believes in tempering the wind to the sport horse owner. They have announced that in trotting and pacing races the entrance fee in all purses will be five per cent, with an additional five per cent from the winners of money in classes where the number of entries is eight or more. In classes where there are less than eight entries, five per cent additional will be required from starters. It is believed this change in requirements will help more to get in during the prevalent hard times.

### The Apricot Crop.

This crop is proving as a rule even lighter than expected, and is probably the smallest of the last decade. Southern California has the call on apricots this year and will profit by them. Though the crop is light north of the Tehachapi, there will be some dried, especially as the hot wave has ripened them faster than they could be handled in shipping condition. On June 24th a carload of new crop dried apricots was shipped from Fresno—believed to be the first carload to move in the State this year.

### Street Trees.

Town and city councilmen have usually very little respect for street and avenue trees. They allow them to be topped by telephone and electric light linemen until their natural beauty is destroyed,

and they allow their roots to be cut away by street graders until the poor mutilated trees die in despair. It is exceedingly well to show city authorities that tree-loving property owners have some rights in their trees which municipal hirelings are bound to respect. Too often men are indifferent to these things. They are apt to swear and growl and lose their trees. The ladies have a more effective way. Recently the Santa Rosa City Council passed an ordinance in regard to the new sidewalks which caused property owners to fear that all fine shade trees on a number of the principal streets would have to be cut down. The Council met again later and a large delegation of leading ladies bore down upon the councilmen in championing the cause of good shade. A number of them addressed the Council so forcibly and persuasively that the councilmen all threw up their hands in complete surrender, adopting resolutions that fully protect all the shade trees in the city. We hope other ladies will note the Santa Rosa case and save their trees.

### Game Wardens.

A new class of office holders provided for by act of the last Legislature is already in trouble, as the Superior Court of San Diego holds that they have no title to existence. One of the new wardens in that county brought suit for his salary, and the Superior Court Judges in bank decided that the act creating the Game Warden is unconstitutional, because it delegates to the Supervisors a discretion to appoint or not, which is a power the constitution confers only upon the Legislature. Unconstitutionality rests also on the further ground that if such office is created it must be for all classes of counties. This game law did not specifically name counties of the class which include San Diego, and so left the matter of appointing Game Wardens optional with the board. The San Diego officer will appeal to the Supreme Court, and expects other Game Wardens to join with him, as this decision will affect the drawing of their salaries.

### Fruit Prices.

Fruit crops are so short this year that much activity and liberal views among buyers are to be looked for in spite of the hard times. From twelve to sixteen cars of fruit daily are being shipped from Sacramento. This is about one-half of the usual quantity for this time of year, the crop being very short. Bartlett pears will be less than half a crop. Cannerymen are offering \$15 to \$35 per ton for apricots and \$22.50 a ton for Bartletts. At San Jose it is reported that there is quite a flurry in the fresh-fruit market and prices are going up with buyers plentiful. Apricots large enough for canning are selling at \$35 per ton without regard to variety. Moorpark, being a larger and finer variety than any other, ought to bring at least \$40. Orchards of Moorpark could be bought at \$35, taking everything as it runs. Orchards have been sold without regard to size or variety at \$30, taking everything. These prices are apt to induce the grower to gamble on the future, but that is usually quite a dangerous thing to do. A good round price, according to the times, is generally a good thing to take. The very top notch is oftener missed than hit.

### Educational Effort.

It is an old truth that California should do more and more to make her products known, for to become known is to become popular. H. J. Edwards, of San Jose, who has just returned from a month's trip through the East, reports a business revival in nearly all branches, and in regard to California wine says: "What California wants to do is to commence a campaign of education to teach the people of the East to drink California wine without pouring it from a bottle bearing a French label. The people there pay \$2.50 for a bottle of alleged French wine which comes from California and can be bought here for fifty cents. A campaign of education on the way to handle and to cook California dried fruits ought to be inaugurated also." This is eminently true and should be repeated until it is realized.

### Wine Matters.

The California Winemakers' Corporation is gaining important accessions to its membership, and promises to realize what has been expected of it in improving the wine business from a grower's point of view. The wine crop will be less than expected, and this will help the growers' movement for fair returns. The membership in the corporation is now said to be over 200 cellars. They are waging war against outsiders in an effective way. It is reported that two houses are offering wine at New Orleans at 18 cents a gallon. As this is two cents below the market it has ceased making shipments to that point until the stock of the undersellers, which is said to be small, is out of the way. This will prevent a ruinous competition. It seems assured that the undersellers cannot secure wine enough to break the guard which now stands around the California wine product.

## From an Independent Standpoint.

It would not be surprising if the silver issue were to split both the old political parties wide open. The differences are so radical, and the passions growing out of the discussion are so intense, that there seems no room for friendly compromise. The time is past when water may be carried on both shoulders. It has come to a straight issue on free coinage at the old ratio of 16 to 1, and the parties must before long come to a stand unequivocally for or against. The general drift of the Republican party during the past few weeks has distinctly been adverse to the free-coinage proposition—naturally so, since the chief strongholds of the party are in the States where the creditor interest is greatest. Following the declarations of the recent Ohio Republican convention, there has been something very like a general Republican alignment on the basis of bimetallicism subject in its terms to international agreement. This position fails to satisfy extreme silver men, who charge against it that it is practically an indefinite postponement of the whole question; and, further, because it consents that the United States shall, in a measure, subordinate its financial policy to that of England and other European countries. The position is on its face a weak one, since it confesses the evils of the gold standard without proposing anything better in the way of reform than an indefinite hope of change by and by, when England gets ready to alter her financial policies.

That there is within the Republican party a large body of sentiment which will not be satisfied with the hope of "international bimetallicism" has been made manifest in a very positive way since our last writing. At the annual meeting of the National Republican League at Chicago last Thursday and Friday the silver men appeared in great force and promptly brought up the matter in open convention. The organization was in the hands of the anti-silverites, who contrived to refer the silver propositions to the committee on resolutions. Here the anti-silverites had a majority, but the feeling was so strong that trouble was avoided by ignoring not only the silver question but all other questions, and by the adoption of resolutions having no bearing upon party policy. The diplomatic explanation of this course is that it would be out of keeping for the League to attempt to define the lines of party principle prior to the meeting of the National Republican Convention. This, of course, is mere subterfuge, the real reason being that it was deemed inexpedient to force the silver issue within the party at this time. The sentiment for silver was found too strong to be overborne without a fight, and it was thought best to dodge a fight for the present.

The recent drift of Democratic sentiment, as we have hitherto noted, has been toward the free-silver side of the issue; and but for the positive attitude of the Administration and its authority over the party organizations in the several States, there seems no doubt the silver principle would before now have been duly accepted as a canon of Democratic doctrine. Indeed, in spite of the Administration, there has been a wide Democratic acceptance of free coinage. That the rank and file of the party is favorable to it, there can be no doubt whatever. In nearly a dozen States there have been "silver conventions" under the auspices of the local Democratic organizations and in the conventions—like that recently held at Memphis—nominally non-partisan, Democratic influence has been largely preponderant. The movement, however, is by no means unanimous. Within the week Chairman Gould of the California State Democratic Committee has declined to call a "currency convention," and has taken a position in line with the Administration. On Tuesday the Kentucky State Democratic Convention, after a stormy debate, declined to pass a free-silver resolution, in deference, it is declared, to the anti-silver views of Secretary Carlisle. It remains to be seen what effect this action will have upon the Kentucky Democracy, whose feeling is said to be very largely for free silver.

Thus, it will be seen, both parties are menaced by the silver issue. Each must, within a few months, come to a definite policy, and it looks now as if a decided declaration either way would be the signal for



a big party defection. If in both parties the conservative elements should prevail, there seems no doubt that there will be a large independent silver movement next year. It is very unfortunate that this currency question, which is purely one of economics, must be settled by the methods of political warfare. But neither side seems willing to consider it calmly or even to allow decency of motive in those who hold opposite views. The very terms in which discussions are carried on have been designed in an offensive spirit. The cries of "gold-bug," "honest money," "silver fool," are in themselves calculated to make offense between those who ought to be able to reason together in friendly spirit for the common good. Some day we may learn to settle purely business questions like the tariff and finance in a calm business spirit; but not yet. Public waste and business demoralization make a big price to pay for the pleasure of fighting—but we shall continue to pay it until we grow wiser.

The retirement of Lord Rosebery (Liberal) from the official headship of the British Government, and the succession of the Marquis of Salisbury (Conservative)—all within the past five days—illustrates in an interesting way the flexibility of the English system. On Friday night a question was put before the Commons designed to test the sentiment of the House towards the Rosebery ministry. The vote was adverse by four or five, and within a few hours it was known that the "Government," or what we would call the "Administration," would resign. Under our system of fixed tenure, the incident would have passed unnoticed; or, if the subject were serious, might have run into a "deadlock." Nothing of the kind can happen in England, since the Government, which is nothing more or less than a committee of the House of Commons, must resign when it fails to command a majority. That there are advantages in a system which thus instantly reflects public changes in political sentiment is not to be denied. The Rosebery ministry has been weak from the beginning. In its best days it had a majority of less than forty, made up of such strange elements as the advanced labor members, the members devoted to Episcopal disestablishment in Wales, and the Irish home-rule section, in combination with the straight English Liberals. While Mr. Gladstone, by the forces of his political skill and of his great prestige, might hold together and control such a following, it was too great a task for a new hand like Rosebery. The young man has lacked experience and force for the work, and he has been handicapped by the manifest incongruity of his dual character of hereditary peer and chief of the Liberal party. The Marquis of Salisbury accepts office simply as a stop-gap, and within a few weeks there will be a new parliamentary election—with what consequences no man may now do more than guess.

### Inflamed Eyes in Calves.

TO THE EDITOR:—In this dairy many of the calves are affected with a disease of the eye. The disease is limited to the calves, the cows being entirely free from it. In the earlier stage of the disease the symptoms are the same as when foxtail gets into their eyes—swelling and discharge of tears. In a week or two the disease advances, and there is slight fever around the eyes; the eye-globe turns to a dull whitish color, and more or less protrude. The calves are generally in good condition.

Both eyes are affected, but if let alone they recover in two or three months, and after recovery the eyes are sound. I think the disease is infectious, for as soon as one gets it others commence having it also. The calves are fed on an alfalfa pasture. The water is good, but around the dairy is light alkali soil. The disease has been prevalent for about two years. We do not think the cause is from the feed or water, because sometimes it appears in newly born calves.

Visalia. G. Y. CHIASHI.

ANSWER BY DR. CREELY.

This is a contagious disease of the conjuncture (the mucous membrane of the eye-lids). The acute inflammation communicates to the eye proper, causing it also to inflame, hence your bluish tint to the cornea. Isolate the calves showing the symptoms, put them in as dark a place as possible, bathe the eyes with salt water two times daily, then inject into the eye the following prescription:

Sulphate zinc.....12 grains.  
Pulv. alum.....24 grains.  
Sulphate morphine.....6 grains.  
Rose water.....2 ounces.  
Mix.

San Francisco, June 20. E. J. CREELY, D. V. S.

### The Outlook of the Wheat Crop on June 1st.

The report of June 1st, consolidated from the returns of the correspondents of the Agricultural Department, makes the acreage of winter wheat at present growing, after allowing for abandonments, 96.1 per cent of the area harvested in 1894.

The percentages of winter wheat acreage, upon the basis indicated, of the principal States are as follows: Ohio, 95; Michigan, 90; Indiana, 93; Illinois, 95; Kansas, 87, and California, 115. The percentage of spring wheat area for the entire country is 99.5 per cent, being but a slight reduction from last year's area. The percentages of spring wheat acreage of the principal States are: Wisconsin, 107; Minnesota, 100; Nebraska, 101; North Dakota, 100; South Dakota, 100.

The condition of winter wheat has fallen decidedly since last report, being 71.1 per cent against 82.9 on May 1st. The condition reported June 1, 1894, was 83.2 per cent. The percentages of the principal States are as follows: Ohio, 70; Michigan, 77; Indiana, 56; Illinois, 51; Missouri, 70; Kansas, 37; Nebraska, 37; California, 102.

The condition of spring wheat shows an average for the whole country of 97.8 per cent, and for the principal spring wheat States as follows: Minnesota, 109; Wisconsin, 97; Iowa, 101; Nebraska, 60; South Dakota, 98; North Dakota, 99; Washington, 96; Oregon, 99. The average percentage of all wheat is 97.1, and the condition of the same is 78.6 per cent.

[The effect of June weather in California has been questionably to reduce the output at the harvest which is now beginning. The continuous north wind has reduced the prospect at least 10 per cent—possibly much more.]

### Gleanings.

*Pajaronian:* The berry growers of Alviso pay but 26 cents per chest to land their strawberries in San Francisco. The Pajaro growers pay over three times that amount in carload shipments. The Alviso growers have water competition.

*RIVERSIDE PRESS:* Horticultural Commissioner Havens lately ordered 15,000 rhizobii at Santa Barbara. Mr. Havens says he finds difficulty in placing these parasites, as they cost \$10 per 1000, or one cent each. However, he expects quite a number of orchardists to order, and with the 3000 or more monthly he expects to receive from the State Board of Horticulture, there will possibly be 100,000 of the parasites liberated in orchards affected with the black scale, during the summer.

*CHICO CHRONICLE-RECORD:* We were recently shown some fine specimens of Butte county tobacco by Theodore Chambers. The specimens were in twists or rolls, and were of a fine rich color. The tobacco was raised on the Hixon ranch on Butte creek, some four miles above the Oroville bridge. The plants were sun-cured, and we are informed that it is much sought after for smoking purposes. The soil is a loose, rich loam, such as is required for the successful production of the plant. We have the warm climate necessary, as well as the soil, and we venture to say that tobacco growing could be as successfully carried on in Butte county as at Gilroy, in Santa Clara county.

*HANFORD JOURNAL:* One of our Hanford business houses within the past two months disposed of 3000 pounds of home-made bacon. A singular occurrence took place in one or two sales of this bacon. A party who would not believe bacon could be made in this country called at the store and wanted Eastern bacon. The merchant had none on hand, but said nothing and supplied that made here. The next day the purchaser returned to the store and inquired how much of that bacon was on hand, he wanted 100 pounds before it was all gone, as "it is the best bacon I have had in my house." He told several of his neighbors about the fine Eastern bacon he had secured, and the merchant was kept busy for a day or two weighing out that "Eastern bacon," "the best I ever tasted." Had the merchant given the snap away the Eastern bacon eaters would have turned up their noses.

*SONOMA COUNTY FARMER:* Last year vines made a very uneven start, receiving several setbacks, the last one being the heavy frost after the rain about the 22nd of June, still the vintage was good. This year vines have made an exceedingly vigorous growth, but the grapes are not well set. This is especially the case with the Zinfandel, the principal wine grape of Sonoma county. The Berger and other white grapes are doing better, but conservative men, who base their estimate upon facts as they find them, place the grape yield at from 50 to 60 per cent of a full crop. While this is particularly true of Bennett valley, inquiry develops the fact that this is an off year for grapes throughout the county. Careful observation shows that those who have sulphured thoroughly in the past have the most thrifty and productive vines, suffering little if any from mildew and fungoid growths. But even in their case the bunches are generally smaller and less in number to the vine, though it is expected that there will be a greater percentage of fine, large grapes matured.

*SUTTER COUNTY (Yuba City) FARMER:* Seven fruit pickers at Rancho Sutter (Stabler's) struck Thursday morning, on account of the introduction of a system of tallying the amount of fruit picked. The system was used successfully last season and after the first day there was no objection to its use. Most of the work in this orchard is piece work, but on account of the light apricot crop this year the work of harvesting is done by the day. However, a label is pasted on the end of each box and every picker has his number, which he affixes to the label. Not only is it possible to tell the amount of fruit picked daily by each man by this system, but it is possible to ascertain who has picked unripe and undersized fruit. The foreman of the pickers can easily find the man who is not picking right and the mistake is rectified. To this system the men objected and refused to work. White labor is not advantaged by striking on trifling pretences, especially at an orchard like Rancho Sutter, which has employed only this class of labor since the trees were planted ten years ago.

### Rainfall and Temperature.

The following data for the week ending 5 A. M., June 26, 1895, are from official sources, and are furnished by the U. S. Weather Bureau expressly for the PACIFIC RURAL PRESS:

| CALIFORNIA STATIONS. | Total Rainfall for the Week..... | Total Seasonal Rainfall to Same Date..... | Average Seasonal Rainfall to Date..... | Maximum Temperature for the Week..... | Minimum Temperature for the Week..... |
|----------------------|----------------------------------|-------------------------------------------|----------------------------------------|---------------------------------------|---------------------------------------|
| Eureka.....          | 46.30                            | 55.20                                     | 44.31                                  | 60                                    | 46                                    |
| Red Bluff.....       | 28.87                            | 22.16                                     | 25.50                                  | 108                                   | 66                                    |
| Sacramento.....      | 24.11                            | 16.35                                     | 22.01                                  | 102                                   | 54                                    |
| San Francisco.....   | 25.70                            | 18.47                                     | 24.56                                  | 86                                    | 48                                    |
| Fresno.....          | 14.15                            | 8.53                                      | 10.97                                  | 108                                   | 60                                    |
| Los Angeles.....     | 15.93                            | 6.73                                      | 20.93                                  | 88                                    | 50                                    |
| San Diego.....       | 11.61                            | 4.19                                      | 11.04                                  | 76                                    | 54                                    |
| Yuma.....            | 2.97                             | 2.16                                      | 3.56                                   | 110                                   | 62                                    |

### Weather and Crops.

Report for the Week by the Director of the State Weather Service.

Director Barwick of the Weekly Weather and Crop Service summarizes as follows:

The average temperature for the week ending Monday, June 24th, was for Eureka 52°, Independence 72°, Los Angeles 70°, Red Bluff 86°, Sacramento 79°, San Francisco 62°, San Luis Obispo 70° and San Diego 64°.

As compared with the normal temperatures, there is an excess of heat reported at Fresno of 7°, Los Angeles 1°, Red Bluff 10°, Sacramento 9° and San Francisco 2°, while the heat deficiency is reported at Eureka of 3° and San Diego 2°.

This excessive and abnormal heat in the fruit and grain growing belts of this State have rapidly ripened the fruit, as well as maturing quickly the late sown grain.

Harvesting is general and the output is very unsatisfactory indeed, owing to the continuous high and drying northerly winds, the former shelling out the grain in the heads of the riper wheat, and the latter shriveling the kernels of the late sown grain.

Fruits of all kinds will only be a fair crop.

The grape yield promises to be a light one, excepting the white varieties which will give nearly a full crop; especially is this true of the Muscats. Hops are doing fairly well, the high winds injuring them slightly but not enough to effect their producing qualities.

#### Sacramento Valley.

*TERAMA (Red Bluff)*—The characteristic features of the week are the abnormally high temperatures with northerly drying winds; under such conditions they are detrimental to summer crops; fruit is stunted in growth and ripening ahead of time. The wheat harvest is now in full blast, and is not at all satisfactory, as regards both quantity and quality; the most of the kernels are somewhat shrunken, which, with the amount shelled out by the winds of two weeks ago, reduces crop expectations by over one-third. Grasshoppers are reported in the southwestern portion of this county, and are doing considerable damage to the grape vines.

*BUTTE (Chico)*—The wheat and barley yield of this county will be unusually light this year. North wind in many instances has caused the wheat to shrink and in others not to fill at all. Rust has also done some damage. (Biggs)—The recent north winds damaged the wheat crop at least 30 per cent, and reports from Colusa and Glenn counties fix the damage about the same.

*SUTTER (Fairview)*—The grain has turned out fairly well for this season. (Yuba City)—The prune crop now gives promise of being better than was first anticipated after the "drop" took place in the spring. In the principal orchards in this county there will be a good two-thirds crop, and the quality will be excellent. The harvesting around West Butte is going on, and the wheat is of good quality but not up to the average in yield.

*YUBA (Marysville)*—The apricot crop is found to be even lighter than expected and, although it was hoped that the peach crop would be full, yet it is evident now that the best orchards will not have over two-thirds of what was expected a month ago.

*SACRAMENTO (Sacramento)*—Barley will be a heavy crop. Fruit is coming along quite fast. Bartlett pears will not be more than one-third of a crop. Hops are doing well.

*YOLO (Woodland)*—The fruit in the greater portion of this county has been damaged, or rather decreased, forty per cent by the combined agencies of frost and wind, and the north wind has damaged the grain to such an extent that the yield will only be about one-half of that expected.

*SOLANO (Davisville)*—The heavy north wind of the 16th has threshed out lots of the riper grain, and the heat has cooked some of the fruit on the trees.

#### Napa Valley.

*NAPA (Napa)*—Peaches, apricots and almonds a light crop; other fruits doing well and about an average crop. The hot weather and north winds did very little damage in this valley. Hay crop good and grain doing well.

#### Sonoma Valley.

*SONOMA (Healdsburg)*—There has been too much north wind during the past week for the crops; it has been largely productive of "dry feed" in the pastures, and has unduly hastened the ripening of much grain. It has been rather rough on fruits in some localities. The grape crop will be a light one this season. Hay is nearly all cut, with a crop much above the average, both in acreage and yield. (Santa Rosa)—Oat harvest going on, and soon barley and wheat will be ready for the reaper. Crops are reported to be good. (Sonoma)—Grapes will not be a heavy crop. The berries have







## HORTICULTURE.

## The Future of the California Fruit Industry.

TO THE EDITOR:—I have just read, with a great deal of interest, and I trust profit, the admirable essay of Gen. Chipman on the above subject, in the *RURAL* of June 22d, and I can endorse every word of what is said as to the natural advantages of this State, which I believe is destined to become the most glorious of all in the Union. I even believe that Gen. Chipman has not gone far enough in alluding to its unlimited possibilities. Do we fully realize that every little valley, every range of mountains, has its own climate, so to speak, where a special product, or a whole class of them, can be grown with special advantages? To cite but a few instances: Napa valley, in a straight line, is only about fifteen miles from Vacaville and Pleasant valley, yet fruit ripens there—the same varieties—about six weeks earlier than here. Bartlett pears—the general crop—ripen here in August, and are all harvested by the end of that month; yet I have seen fine, sound Bartlett pears brought into town here, just picked from the trees, in the middle of October, which came from a mountain ranch on Atlas Peak, only nine miles from here. Apples grown in the same location were brought to the Midwinter Fair at the end of March and kept a month later, and were as fresh, crisp and juicy as if they had just come from the tree. We meet with such instances every day, which must convince even the most skeptical that our State is destined to be first in almost every branch of fruit growing, and I have no hesitation in saying in almost every branch of agriculture.

With sixty-eight years of life gone over my head, of which sixty were devoted to agricultural and horticultural pursuits, I became convinced of the superior advantages offered by California fifteen years ago, and to-day there cannot be a more enthusiastic advocate of its advantages than myself. I love this glorious State and its people. I admire their pluck and energy, but I think that serious mistakes have been committed, and it is the purpose of this paper to point out some of them, not from a spirit of fault-finding, or a love of criticism; but because I think it the duty of every one to assist in making this the State of *Rural Homes*, where every one can rest under "his own vine and fig tree."

Gen. Chipman has well said that every fruit of the temperate zone succeeds equally well here, and most of the tropical. In fact, our season for fresh fruits begins in May with cherries and strawberries, and extends into December; it can even be lengthened out for several months with our winter pears and apples and Japan persimmons, quinces, etc. I have picked fresh plums of Coe's Late Red from the trees at Christmas. Here is an immense advantage we possess, and the author of "Ten Acres Enough" would have written a more charming book still had he been located in California. But how do we use this advantage? Most of our fruit growers are specialists; they plant hundreds of acres of one particular fruit which is said to have yielded so much profit per tree or acre, and which they multiply at once, especially if they are beginners in the business, into untold profits when their trees bear their first and second crops. Instead of this, what do they find? When their trees come into bearing they need a great amount of help to utilize their crops. Much of this help is of a very indifferent character, as they expect to stay but a few weeks. They have to bring their own blankets, sleep under an oak tree or hay-stack, board themselves, and do mostly slipshod work. That the work is but indifferently done and half of the product wasted is a natural consequence. That the relations between employer and employe cannot become, under such a system, of the nature which they ought to, assuming that of mutual interest and well-wishing, is self-evident. It demoralizes both, and is at the root of the tramp evil in this State. It is asking too much of human nature to suppose that the employed should take an interest in a place which he will have to leave again in a few weeks, and that the employer should care much for the individual welfare of a man or woman whom he will perhaps not see again for the next few years.

Now, let us look at the other side of the picture. We will suppose an industrious family to come here with means enough to buy say from 20 to 30 acres of good land in some healthy locality, either improved or unimproved. I would not advise any one to settle on such a tract unless it is planted and in bearing, or he has the means to pay for improvements and wait for the result. But if he can do this without burdening it with a mortgage, and plants it with a variety of fruits which will succeed each other in ripening, and where every member of the family can find easy and healthy employment, (say on a thirty-acre place, 12 acres in orchard, 5 acres for pasture and chicken yard, gardens and ornamentals, 10 acres in hay and grain), he can utilize, with the help of his family, and perhaps a hired man of the trusty kind, whom he can give a home all the year round, everything he grows on the place. He can have light and healthful labor, keep his own stock, and realize some income every day in the year. He need not be

crowded with work at any time, can do something for home adornment, and his family will grow up happy and contented around him, realizing that this is the country for happy homes, if it is to be found on God's foot-stool. Such a family can raise almost everything they need on their own premises, keep a cow or two, a span of horses, raise poultry and eggs enough, and in our glorious climate lose but few days of healthful out-door exercise. We have school advantages everywhere within a mile or two, and there is no reason why an intelligent and happy race should not flourish here better than any other State in the Union.

But this does not alone apply to horticulture and farming in a small way. Diversified farming should be the rule, instead of the exception, in every branch of it. Is it not sinning against destiny to see immense grain fields in our valleys and the farm houses standing in the midst of them, with hardly a tree or shrub to shade them and make them pleasant? Is it not horrid to hear of the malaria encountered during harvest time, when the remedy in the *Eucalyptus Globulus* is at their very doors, and would have the same effect, only in a larger degree, on our valleys that it had on the Campagna, near Rome, where it made that country, abandoned even by the most hardy, habitable again. Besides, it would soon yield all the fuel which must now be hauled from a distance. We are blessed with the most ornamental as well as the most useful tree, the redwood, in our coast regions, which, on account of its reproducing quality from the roots, would be a treasure for all times. But if we allow other nations, which fully appreciate its precious wood, to dig it up by the roots are we not squandering our treasury? But this is already too lengthy; I may return to it at some future time.

GEORGE HUSMANN.

Napa, Cal.

## Better Lemons Will Pay.

J. W. Scott, manager of the A. C. G. Lemon Association, gives the Covina *Argus* the following points on the lemon business:

That lemon growing is a very profitable industry when carried on rightly has been demonstrated in many localities in southern California. The fact is very evident to every intelligent orchardist that there is no profit in growing a very inferior grade of any kind of fruit. Especially is this true of the lemon, as it must be strictly first-class to insure its carriage to our Eastern markets, and unless we can place our lemons on the markets of the Eastern cities in first-class condition in every respect, we need not expect to make lemon growing profitable.

There are many things to be considered in growing a fancy lemon, only one or two of which we have time to speak of at present. The black scale, which is causing us to wash our fruit, must be exterminated this year or we are going to suffer ten-fold next year on account of it. Get rid of it as soon as possible either by spraying or fumigating! The one great drawback to the growing of fancy lemons is the lack of thorough and systematic pruning. Here lies the main cause of so many low-grade lemons. There is too much heavy wood growth in the wrong place; fruit is growing too far from the body of the tree. A great many growers have done considerable pruning, but they have not cut back far enough.

Every city along the Pacific coast is at present full of an inferior stock of lemons, as everything that will not carry East is dumped on the coast, while the Eastern cities are crying for more California lemons, but we have a very small amount of lemons that will carry to these markets successfully. Now let us pull together, and there is no doubt but we can make lemon growing one of the most profitable industries of our great State.

## Eating the Red Scale.

Horticultural Commissioner Havens of Riverside tells the *Press* that he has examined the work of the "steel-blue ladybird" in the orchard of L. N. Kercheval in Los Angeles county, and that they were feeding on the red scale, and were being given away to orchardists who came after them. He found that in April, 1892, a colony of about 400 had been placed in Mr. Kercheval's orchard, and that it was supposed they had entirely disappeared. But the second year a few appeared, and now they are there by the thousands, and are evidently feeding on the red scale. He further states that there is plenty of red scale there for them to feed upon—more on one acre than could be found in the whole of Riverside valley. He brought a colony home with him, and will place them as soon as he finds a tree sufficiently affected with red scale to give them something to do.

## New Distribution of Rhizobius.

Alexander Crow, the Quarantine Officer of the State Board of Horticulture, has just returned from the southern part of the State, where it has been for the past five weeks distributing black ladybirds. They were imported from Australia two years ago by Elwood Cooper, whose orchard was nearly ruined

by the black scale. The two dozen ladybirds increased at a marvelous rate and soon cleared Mr. Cooper's trees of the pest. A colony of them was sent to E. W. Harold, whose orchards are near Saticoy, Ventura county. It was from Mr. Harold's that Mr. Crow has just distributed nearly 800 colonies of insects, averaging fifty to a colony, to as many orchardists in the State. The reports received show that the ladybirds arrived in good condition, and at once attacked the black scale pests.

Mr. Crow stated that the pest had obtained a good hold in the orange orchards of Los Angeles, San Bernardino, Orange and Riverside counties. County Commissioner Scott of Los Angeles sent the insects to all the infected places, and then distributed the colonies in the native trees in the foothills. Now the trees are practically free from the pests.

Mr. Crow has received two new varieties of ladybirds from Professor Koebele, who is now traveling in Japan for the Hawaiian Government. They are destructive to several scale pests on this coast.

## FRUIT MARKETING.

## A Chicago Auction Sale.

As there is so much interest in Eastern auction sales of California fruit, and so few growers can attend them, an account of the operation as communicated to the *Sacramento Bee* will be widely acceptable:

Imagine a comfortable room, in size about eighty feet square, ceiled throughout, ceiling and sides alike, with narrow tongued and grooved lumber, matched in alternating dark and lighter wood, finished in varnish or oil, well lighted and conveniently appointed; about 100 patent school desks of the larger size and folding variety, also in light wood, fastened to the floor in the approved manner of the well-regulated school-room; at the east end of the room a raised platform enrailed, also in the proper shades of finish. If the stranger asked for what this room was used, if he were ushered into it when unoccupied, he would at once and without hesitation place it in the category of education, albeit the convenient distribution in and about the floor spacing of the aforesaid seats and desks, of a large number of spittoons of fibrous wood and somewhat exaggerated proportions, might disassociate it from any primary department of education.

*A Great Floor Space.*—Downstairs are long stretches of depot accommodations, similar to what is known as the fruit sheds about Front street in Sacramento. The floors are kept scrupulously clean, and the attendants dislike very much a "leaky" or "soft" cargo of fruits, for these involve the thorough cleansing and scouring of the floor and the doping of it later on with a solution of carbolic acid, not only to cleanse and sweeten, but also to keep away the flies which would otherwise be attracted in large numbers.

The depot accommodations are in sections and when all connected and in use, which not infrequently occurs at the height of the season, there is a continuous floor space of over four hundred feet, equal to the length of a block in Sacramento with one of its streets added. This will accommodate nearly forty carloads of California fruits piled in tiers, twenty boxes high.

*Where Our Fruit Is Sold.*—This is the place, and the only place, thanks to the efforts of the California Fruit Growers' and Shippers' Association, with its headquarters at Sacramento, where California fruits are now handled and sold in the city of Chicago.

The morning of June 12th, when the writer visited the locality mentioned, was following one of those close, stifling hot days so peculiar to this latitude at this season, ending, as the day before did, with one of those heavy thunder showers, with the tremendous roar and discharging of heaven's artillery, with which the Californians are happily unaccustomed, followed by a drizzle-drazzle of rain which adds to the discomfort and creates a depressing effect all around. It wasn't a particularly good day for sales, either, for but five carloads of fruit arrived during the night or wee sma' hours of morning. But the lamp light had been employed and by 7 A. M. all was in readiness for the inspection.

*The Selection a Lottery.*—The five carloads of fruit had been arranged in lots and neatly piled in tiers, as intimated, of twenty boxes high. One box of each lot had been opened, exposing the contents to view. But one box is opened, and it is never selected. It may happen to be the very best box in all of the lot, or per contra, it may also happen to be the very worst. To this extent, and this only, the selection is a lottery. Dodging in and about the tiers, piles and lots are all manner of men, of all shades of complexion, nationality, dress and "previous condition"—importers, jobbers, dealers and hucksters, he of the diamond-studded shirt front jostling his neighbor of the sabot and blue blouse. Each has been furnished, on application in the office upstairs, with printed catalogues of what is to be sold, a separate catalogue for each carload. These are placed on what might be called a clip of exaggerated propor-



tions, upon which the catalogues are spread. The intending purchasers go nosing about every box, tier and lot, making a careful study and survey of each particular lot, and noting quality, condition, etc., as a future guide to the purchases to be made later on.

*When the Gong Sounds.*—At 8 o'clock the gong is sounded, and a mad rush is made for the school-room previously described. All are seated comfortably, and therefore well at ease. The catalogues, which have been checked and marked, are spread upon the desk and before each attendant. A clerk mounts the platform and announces the corrections, for it seems even fruit shippers make mistakes, and occasionally it occurs that the checking out of the contents of a carload of fruit does not tally with the manifest. The offerings comprised cherries of the Tartarian, Bigereau, Royal Anne, Pontiac, Rockport and Burr Seedling varieties. Royal apricots, Alexander and Briggs May peaches, Cherry, Clyman and St. Catherine plums, and the California celebrated (an all-around good seller) Tragedy prune. This afforded a good variety and choice.

*The "Trouble Begins."*—Corrections made and checked up with an additional clerk seated meanwhile upon the platform, there emerges from the door of the office at the west end of the room the Hamlet of the occasion. A pleasant-faced individual, of say 45 years, of the brunette type, above medium size, full six feet in stature and 200 pounds in avoirdupois, cleanly shaved, except as to a mustache—such a face, form and carriage as the ladies might rave over if he were upon the operatic stage instead of the auctioneer's block. It is the auctioneer, Mr. Adams, who strides firmly across the room and mounts what Mother Partington was wont to call the "nostrum," and, as Mark Twain would say, "the trouble begins."

The manner of selling differs from the ordinary auction by catalogue, from which sales are made in regular rotation, and more nearly resembles pool-selling, in that the first bidder takes his choice on the bid. For instance, one car the first and highest bid was \$3.30. The purchaser selected the third lot on the catalogue, which comprised a lot of Tragedy prunes, and paid this price per half crate for the lot. Whereas the first lot recorded, being twenty-seven half crates Royal apricots, and presumably not in very good order, fetched but 80 cents for the lot, also per half crate. The lots also vary from two to half a dozen boxes up to fifty and a hundred. The bidder is not necessarily required to take the whole lot. He may take whatever number of boxes he desires; others, however, having the right, when the first purchaser is satisfied, to take from the same lot any number of boxes, or the *balance*, which is frequently called for and taken up, it remaining with the auctioneer to award it to whoever first comes to his notice, at the same price.

The auction over, the genial gentleman who has "held" the crowd so successfully, mops his steaming pores and steps down. A rush is made for the cashier's window, where bills have been prepared in advance. Pennies, nickels, dimes and quarters are drawn from leathern bags and wallets of the small fry and a rush is made for the "goats." The smaller dealers are required to spot cash. The larger dealers must settle every Monday. By 10 o'clock, two hours after the opening of the sale, not a vestige of the five carloads of fruit remains in the depot, and the decks are cleared for a repetition of similar scenes on the morrow.

#### Was It the Boxes?

TO THE EDITOR:—I saw in last week's RURAL (June 15th) a complaint from New Orleans in regard to peculiar flavor, bad taste, etc., of California fruit. No doubt the bad taste, etc., complained of was caused from resin, pitch, etc., in pine boxes. Shippers cannot be too careful in buying boxes without pitch in them, as fruit confined in a close ear for a week or more in such boxes is sure to leave a very bad taste to the fruit. SUBSCRIBER.

Antelope, Cal.

### THE FIELD.

#### A New Book on Insect Pests.

Prof. C. M. Weed has prepared a new edition of his work on "Insects and Insecticides." It is an entirely rewritten and new work. The first edition, with the same title, was published in 1891, and was at once recognized as the most generally useful handbook on noxious insects that was available to American farmers. Useful as the old book was, with its 182 pages, 143 cuts and 7 plates, the extent of the improvements in the new edition may be inferred from the fact that it has 336 pages, 176 engravings and 16 full-page plates. It covers the whole field of insect pests very thoroughly and is specially valuable for its complete and up-to-date methods of fighting insects. The work is thus intensely practical.

It illustrates and describes all the important insect pests and goes into great detail in describing rem-

edies for them and methods of preventing their injuries. Great progress has been made in the use of insecticides during the past three years, all the results of which are embodied in this new book. Prof. Weed's work excels in practical directions for applying insecticides that have proven to be of real efficiency. It answers all the questions about insects and insecticides that will come up at any time during the year, and the book is therefore indispensable. The book can be had from the Deway Publishing Co., office RURAL PRESS, at \$1.50 per copy, postpaid.

#### Flat Culture for Corn.

To show our readers who have not recently returned to their old homes that the old East is coming to the California method of flat culture for corn, as we recently showed was the case with potatoes, we take the following from the Boston *Cultivator*:

There has been a great improvement on the methods of cultivating corn. This is partly due to better implements and partly to a better understanding of the requirements of the corn crop. The old-fashioned drag which pressed the soil down while pulverizing it is what is needed to fit land for wheat seeding. But corn wants a seed bed made as light and open to the air as possible. There should be no compacting of the soil. The sprig tooth and cut-away harrows, which lift up the soil as they pulverize it, are what are needed for corn. Wherever they are used the corn crop has been increased.

The most notable improvement in corn growing is the use of shallow cultivators, leaving the surface level instead of the old plan of running a plow between the rows and throwing dirt up to the hills. Plowing out corn is never practiced now by the best farmers, and most of them have learned that it is better to have the surface as nearly level as possible. This is shown by the growth of the corn itself. Its roots run horizontally within a few inches of the surface and fill all the space between the rows. Here, too, most of the rainfall is distributed as it falls on the corn leaves, and is shed off upon their extremities. By midsummer these leaves all point downward to the center between the rows, and just here will be found the larger part of the feeding roots of corn. It is reasonable to suppose that a deep furrow cannot be plowed out after midsummer between the rows without doing enormous injury. That this is so is proven by the experience of thousands of practical farmers.

Last year, when drouth did so much injury to the corn crop, its worst effects were found where the corn had been hilled, taking from the center of the row the soil where it was most needed and piling it around the stalk. Frequent but shallow culture, enough to keep the weeds down, and leaving a level surface between the rows, will enable the crop to get great benefit from the lightest rains, and even from falling dew. There is never a season in the Eastern and Middle States when enough rainfall and dewfall does not come in the summer to make a good corn crop. The trouble has been to save what falls and prevent its evaporation. Shallow and level culture exposes less of the soil to the air, and it also makes a mulch on the surface, which preserves the moisture lower down from being evaporated.

#### To Grow the Largest Melon.

The *Watermelon Bulletin* gives the following directions for growing the largest melon: Select your hill or hills that you want to try for largest melons in your deepest and clearest sand, that has been well fertilized to begin with, not allowing more than two plants to the hill; one is better. Now perforate the ground with holes, such as a broom handle would make, from near the hill to three and four feet in circumference, then with a liquid fertilizer from stable or cow-pen fill in these perforations, rake the surface, and repeat once or twice more during the progress of vines, to cover the ground. Give for your largest melons the form, or young melons, with the largest and stockiest stem as indicating its capacity to draw on the parent vine.

#### Less Desirable Street Trees.

Prof. Husmann continues his notes on street trees, in the Napa *Register*, as follows:

The Black Locust (*Robinia*), which now forms a large part of our street trees, is a fast-growing and handsome tree when young, but when older becomes scraggy and its numerous end pods litter the ground too much to make it very desirable. Besides, its roots run too near the surface, and have an ugly habit of suckering everywhere, which is very objectionable. The Ashes, both European and American, are good, symmetrical trees, but do not grow fast enough for our impatient generation. The Sycamore or Plane is another fast-growing tree, both the eastern and native species, but is objectionable as it sheds its leaves early, does not form a very dense head, and its seed balls will make a great deal of litter, as they drop constantly. None mentioned in this paper are as desirable as those formerly described. And none of the poplars deserve planting;

although very rapid growers, they do not give a dense shade, shed their leaves early, are unclean, and sucker badly from the roots; not even to name them as harbingers of all kinds of noxious insects. Our native Rose Elder, though a fair street tree, is not as desirable as the Maples already described. And surely a dozen varieties of really desirable trees should give variety enough, so that we need not plant any second-class trees. There are, however, some really desirable evergreen trees, introduced mostly from Australia and Japan, which are rapid growers, and are perfectly at home here, and well worth planting as street trees or on lawns. We will take a look at these in my next.

### THE POULTRY YARD.

#### The War Against Vermin.

This is the time of the year when vermin multiplies with startling rapidity, and to carry the fowls through the "busy season" of their enemies should engage the utmost energies of the owner. Of course, measures looking to this end should have been undertaken weeks ago—in fact, such measures should never be relaxed at any season of the year, but they are neglected nevertheless. If this has been the case, it will be necessary to jump right in now and do some very sharp fighting.

Ways to cope with vermin are not new, and yet some people never seem to learn or remember them, and a fresh compilation will be useful. We find such in the Los Angeles *Cultivator*, which will answer a good purpose:

Lice on fowls is one of the most annoying features connected with the poultry business; and although it seems to some almost impossible to guard against their becoming firmly fixed in the fowl-house, it is to others no trouble to keep clear of them. If you will commence in time and pay close attention to your roosts, nests, etc., you can by diligence greatly reduce the probability of having these minute parasites take possession of your buildings. Use kerosene on your roosts at least once a week freely. A good idea is to take the roosts out of the house once a month, cover them with kerosene and set them afire. The oil burns off, killing the lice and germs, but does not injure the wood. After seeing that all the fire is out, replace the roosts and again cover with kerosene. Aside from keeping lice from the roosts, the evaporation during the night (when the fowls are roosting), and the fumes rising, entering their feathers, serve to destroy all vermin on them. Sprinkle sulphur in the nests twice a week. The heat of the fowls while on the nest aids the propagation of vermin to a great extent, but it also causes the sulphur to pass up in fumes, thus destroying all that hatch out. A wash made with carbolic acid, in the proportion of two ounces of crude acid to the gallon of whitewash, is not surpassed for cleansing the inside of the poultry-house. Whitewash your house with this every two or three months. By following the above you will have very few, if any, lice about your fowls.

Should your fowl-house be affected with parasites, shut it up close, take an iron kettle with a quantity of live coals in it, place in the center of the house and throw on the coals a quantity of sulphur. The fumes rising and filling the house will eradicate all vermin.

There are a great many breeds of lice—more than enough to correspond with the breeds of fowls—but of the whole, the greatest mischief is done by three or four kinds, which are persistent and not easily driven off. The worst of the lot on this coast is the red spider louse, which is a very small parasite. Unless very close examination is made, this little fellow will escape observation. Many persons suppose that the birds are free from his depredations because he is so diminutive as to escape notice; but give him a few days grace and he and his mate will multiply so rapidly that countless millions will be present, and in every crack and crevice. It will only be necessary to touch any part of the wall with the hand to find out if they are there. We have known of several instances of their getting on horses where the fowl-house was located next to the stable; and if not speedily attended to, will kill a horse in a short time. They do more damage at night than during the day; and as their small size enables them to hide most anywhere, the best way to destroy them is to make a thin, hot whitewash, add a teaspoonful of strong liquid carbolic acid to each gallon of wash, and, with a watering can, sprinkle (or pour if necessary) it into every portion of the poultry-house, then follow with a brush. Let no part of the house escape—roosts, walls, nests, floor and even the roof must be deluged.

The tick louse is a large fellow, nearly one-eighth of an inch in length, dark in color, with legs near the head. He prefers the head of chicks and sticks close to his victim. A good dusting with bulach insect powder is more than his constitution will endure, and he quickly succumbs or leaves.

The flesh louse—so called because it is nearly the



color of the flesh of the fowls—is very active, long in shape, and feeds close to the roots of the feathers. A good dusting with buhach insect powder renders his location very unhealthy, and once he is out of the way the dust bath will prevent his return.

The flat louse is buff in color and eats portions of the feathers, often stripping the quills clean, giving the birds the appearance of having lost their feathers. Dust the fowls freely with buhach and repeat three times a week.

It is of the utmost importance to keep the quarters clean, as filthy houses will be inhabited by lice. The whitewash solution should be applied every week till there is no sign of vermin left. Many persons advocate using grease on young chicks, but we are thoroughly opposed to its use, having known many valuable chickens to be killed thereby. Insect powder is much safer to use; and if applied with a "powder gun," takes very little. If your soil is sandy, you do not need to provide a special dust bath; but if not, take some dry dirt and add a little sulphur for the fowls to dust in. Keep the house clean and the fowls will free themselves of lice with the dust bath. If strict cleanliness be observed about the house, using kerosene on the roosts and sulphur in the nests, as recommended above, you will never be troubled to any extent with the pest of the chicken-raiser—lice.

#### Pacific Poultry and Pigeon Association.

TO THE EDITOR:—The Association received its charter from the Secretary of State, at Sacramento, May 28th, and is now a full-fledged corporation. The capital stock is \$10,000, divided into 10,000 shares of the par value of one dollar each. Up to date there are 2750 shares subscribed for. The principal place of business is in the city and county of San Francisco, State of California. Object, to foster, protect, conduct and encourage the poultry and pigeon industry in all its branches. Board of Directors elected for the ensuing year were as follows: Frank Seed, S. A. Wells, Elias Ruud, Jno. F. Mecklem, T. W. Leydecker, W. G. Benton, G. W. Cumbers, Geo. F. Emery, Frank Brush, W. P. Archibald, Chas. A. Wright. The following officers were chosen: President, Frank Seed; vice-president, Chas. A. Wright; secretary, Jno. F. Mecklem; treasurer, First National Bank of San Francisco. By-laws were presented and passed to print, special and standing committees were appointed, and the Board of Directors went into committee of the whole to consider exhibition matters, when Mr. I. K. Felch was wired the Association's acceptance to judge the show to be held in Oakland from January 15th to 21st, 1896. Another reputable judge, not yet decided on, will be engaged later, as the Association is promised nearly 2000 birds already, to say nothing of pigeons and pet stock, and will require two good judges. The "Decimal Score Card," by which the exhibition will be judged, is considered much speedier than the old system, and it is intended to have considerable judging done before the show opens, that visitors may have a chance to view the winners.

Much has been said and written lately as to what associations should and what they should not do, and, although it is very hard to suit everybody, we candidly think that the plans of this Association will come as near to it as it is possible to get. It would take too much space here to explain the entire plan of the Association, but a large number of extra copies of the by-laws will be printed and a copy mailed to any address for the asking. We are always glad to receive new members and extend a cordial invitation to everybody in any way interested in poultry, pigeons or pet stock to join with us and make this not only the largest Association of its kind outside of New York, but give old New York herself a rub.

This Association has taken a few advanced steps of which they are justly proud, first of which is the matter of incorporation. We only have to share this honor with one or two associations outside of the American Poultry Association, and that it is of great advantage there is no doubt. First, its business course is plain. Second, the liability of stockholders is only for such part of the liabilities of the Association as their stock is part of the subscribed capital stock. Third, it gives members privileges and advantages without the necessity of "class legislation," or, in other words, without making members pay double entrance fees, as every one will pay the same fees; but, of course, in the event of a surplus, it will be divided among the members or stockholders.

Another thing we are proud of is the fact that our object is not to help one breeder, one class of breeders, or breeders alone, but to foster and protect the industry in all its branches. We fully realize that the swath is wide, but we have eleven directors who are alive to the situation, and all the best poultrymen of California are coming to our support, making failure impossible and success and prosperity for poultrymen sure.

From our correspondence and exchanges it would seem that this will be not only a year for "floral splendor and carnivals" for California, but a year

for "poultry shows" as well. We expect, of course, to have the largest and best, but at the same time wish our fellow associations well. The more the merrier, and the industry will reap the benefit.

San Francisco.

Jno. F. MECKLEM.

## SHEEP AND WOOL.

### Neatly Dressed Lambs.

In a recent bulletin of the Cornell Experiment Station Prof. G. C. Watson gives the following directions about dressing lambs for the New York market: "In bleeding the lamb an opening should be made only on one side of the neck, preferably the left side, immediately back of the head and in front of the cervical vertebrae (neck bones). The opening need not be large, but it will be necessary to give the knife blade a considerable sweep in order to be sure that the large artery is severed. The stomach and intestines should be removed without disturbing the heart, lungs or liver. As soon as the intestines are removed, spreaders should be inserted to give the lamb the best appearance when offered for sale. For lambs weighing from thirty to forty pounds dressed weight, spreaders about fourteen inches long will be about the right length. If too long spreaders are used there is danger of breaking the ribs and thereby injuring the appearance. At each end of the spreader should be made a shoulder and a projecting point. One of these points should be inserted from the outside of the flank near the opening made for the removal of the intestines, the spreader crossing the back diagonally and the point at the other end inserted in a similar manner in the opposite side of the lamb near the chest. In like manner a second spreader is inserted so that the two cross each other, forming an X at the back of the lamb. The caul fat should then be fastened by means of two skewers at the thighs and the points of the spreaders, in such a manner that the whole of the meat not covered with the skin is covered with the caul fat, and in this condition the lamb should be allowed to cool. It is of the utmost importance that all of the animal heat be given off before the carcass is wrapped for shipment. Many lambs have reached the market in a bad condition from lack of proper cooling immediately after slaughtering. This is more frequently observed in the spring months during warm weather.

"Before shipment each lamb should be wrapped with two separate wrappings, the inner wrapping to be of plain tough paper or muslin (if muslin is used one yard for each lamb is sufficient). This should be so put on that it will draw tightly over the front of the lamb to prevent breaking and soiling by handling. An outer covering of burlap or sacking should be added before shipment.

"From the inspection given a large number of lambs in the New York markets, it was evident that often insufficient provision is made for removing all of the bloody liquid from the chest. In the ordinary way of slaughtering lambs more or less liquid will accumulate at this point, and unless it is removed serious injury to the appearance of the lamb, when shown for sale, is likely to occur. To remove this effectually an opening should be made with a large knife at the lower part of the chest and kept free until the chest is completely drained. This should always be done while the carcass is yet hanging."

### The Situation in Western Wool.

S. N. D. North, secretary of the National Association of Wool Manufacturers, gives a comment upon the features of the present situation in "territorial wools," which will enable our growers to see clearly just "where they are at" in the competition with imported wools under present tariff laws. The real problem relates to our merino sheep husbandry in what are known as the territorial States, in which has occurred all the growth that has marked the industry since the enactment of the tariff of 1867. The wools grown in these sections of the far West, being of heavy shrinkage, have never until now encountered foreign competition, because, under the specific tariff, wools shrinking over 60 per cent could not be imported. The foreign manufacturers enjoyed a monopoly of directly competing wools, including the greasy Cape wools, Buenos Ayres and Montevideo wools, Russian merinos, etc., while the American manufacturer, learning the distinctive merits of our territorial wools, and accustomed to their manipulation, came to use them with great satisfaction in every variety of goods where the finer qualities were not essential, or in satisfactory admixture with the latter.

These wools are now competing with the foreign, on a basis of value of from 30 to 35 cents per scoured pound, and this is easily equivalent to a reduction of 50 per cent from the prices commonly obtained during the years when the territorial sheep industry was rapidly building itself up under the stimulus of the exclusion of the foreign competing wools. Another element in the case, the effect of which must shortly

become distinctly traceable, is the matter of freight rates from these far Western States. From London, freight rates are one-third of a cent per pound; from the Western plains it costs from two and a half to three cents a pound to bring wool to Boston; and this difference is practically so much against the Western sheep grower, as against the prevailing prices in the London market.

Whether it is possible to continue to grow this wool under these conditions, is a question which time will definitely answer, if the situation remains as at present. That the attempt will be made, with the spunky heroism peculiar to the settlers of that section, need not be doubted. But it is a mere question of arithmetic; and experience is now busily arranging the divisor and quotient, from which the dividend will appear. Lack of knowledge of all the conditions disqualifies an Eastern man, engaged in other pursuits, from expressing a dogmatic opinion; from our standing point, however, it looks as though the odds were strongly against the Western sheep breeder.

In these territorial States the stock is chiefly of merino, crossed on the native sheep; but the same tendency towards the mutton sheep has been visible there as elsewhere, and we do not doubt that in any event there will continue to be an increase in these varieties of sheep even in the States where sheep husbandry for the sake of the wool has so strongly predominated during the past twenty years. On the basis of this belief rests the statement that the number of sheep in the United States is not likely to decline, under free wool, to a figure below that reported for the British Isles. The economic advantages arising from the presence of sheep on the farm must be taken into account as a large factor in the case. But with that outcome the change in the character of the American clip, through the gradual surrender of the merino, is likely to show itself more plainly from year to year.

### Mutton or Beef.

It might have been thought that with this disposition by the public to discard beef on account of the increased cost, a demand would have sprung up for provisions and mutton, but such has not been the case to any appreciable extent; and why, it is hard to say. The mutton trade should certainly benefit when any difficulty such as the present affects the cattle market. Americans have never taken kindly to mutton, and we venture to say that the proportion of mutton-eaters to beef-eaters in the country is very small, but is accounted for by the fact that up to recently we have not raised sheep for food purposes, but for wool, and consequently the mutton from such sheep has never become popular, as the quality in general has been inferior. A time has now arrived for these conditions to change. The day of inferior beef and mutton has of necessity gone by, for there is no longer any profit in raising sheep for wool; and if raised at all, it must be for their value as food. In view of the backward condition of the mutton trade in past years, for the reasons mentioned above it is obvious that quality will be an important factor in the business hereafter. Our friends in the small stock trade will not be alive to their interests if they fail to recognize that beef's difficulty is mutton's opportunity.—National Provisioner.

### One Way to Shear a Sheep.

In shearing a sheep, the neatest way is to take off the fleece from the belly toward the backbone. A fancy shearer in the old country says he was taught to make a continuous line toward the backbone by successive snips of the shears. These lines met at the backbone on each side. The slight ridges left by the strokes of the shears went down in a straight line toward the under side of the body, giving it an appearance of ribs. This operation was, in fact, called "ribbing." The wethers were usually sold fat after shearing, and this ribbing gave them an attractive appearance.

## THE SWINE YARD.

### Summer Care of Brood Sows.

Although the account which we take below from the *Live Stock Journal* may not suit in all respects California conditions, it is suggestive of the proper policy which should prevail in the handling of breeding sows:

After the pigs have been weaned in the spring, the food required by brood sows will be to some extent dependent upon the number of litters to be reared in one season. When but one litter is reared they do not want so much food given to supplement the pastures. But in any case they should be kept in good flesh. It is a great mistake to conclude that brood sows bring forth superior litters when they are emaciated in flesh. If the sows are to do well for their young, they must be so fed as to nourish the fetus while it is in process of development, and they must also possess flesh to enable them to stand



the drain on the system during the milk-giving period.

The brood sows that rear but one litter a year may be turned on to pasture after the pigs have been weaned in the spring. Any kind of pasture will answer that is juicy and succulent, but usually clover will be found to answer the purpose best, as, when a proper system of pasturing is adopted, it will generally be found to maintain its freshness better than other kinds of pasture.

But they should have some food along with the pasture. Where a number of sows are kept; there is no simpler mode of giving this food than in the form of corn or peas. But where only one or two sows are kept, they may be given swill where it can be spared, but it should have some body to it to build up and sustain the frame of the sow. The same kind of food would also answer quite as well for a large number of sows, but usually there would not be a supply unless it was specially prepared for them. To throw them a little corn in the cob, or to feed a few peas, would answer very well, and it is very easily given. After the stubbles are accessible in the grain fields, brood sows may not want any additional food for a long time, and if they can then pasture upon rape they will not want much additional food other than the pasture. But in the absence of some such food, they should get more or less grain. The amount of grain, however, need not be large, if they can have such food as pumpkins, squashes, or mangels, thrown to them in addition to the pasture. But when brood sows are to produce a second litter, they must be well sustained right along, for the first litter of the season is only weaned a short time before they have to nourish the embryo of a second litter. This they cannot do properly on pasture alone; hence they should get a good supply of meal right along from the time that the first litter is weaned. This meal should be largely nitrogenous in character, but some carbonaceous food may be fed, as the food gathered in the pastures is largely nitrogenous. When a second litter is reared it should, if possible, come in September. The young brood are then weaned while the weather is still mild. After they have been weaned the dam should get a mixed ration in which the carbonaceous and nitrogenous elements should be well blended, for her system must be well sustained in flesh and fortified against the cold weather of winter which is then approaching.

Brood sows should be given large liberty of exercise. It is not only good for the sows, but it is also good for their young. It is a mistake to shut a brood sow up in close quarters either in winter or summer for any length of time, but it would seem less justifiable in summer than in winter, for a brood sow can pick up a large proportion of her living in the pastures in the summer, if only allowed to do so.

When the farrowing time draws near, the brood sow should be confined to a pen. She should be thus confined for a week or two to become accustomed to her new quarters. If not so confined she will be restive and uneasy, and will probably expend a good deal of energy in trying to gnaw her way to liberty.

## THE STABLE.

### To Prevent Kicking in the Stall.

Take two leather straps one and one-fourth inches wide and long enough to buckle loosely around the hind ankles, a piece of trace chain about sixteen inches long, with the end links large enough to allow the ankle straps to slip through easily; another leather strap three-fourths of an inch wide and twenty-six inches long, with loop at one end to allow surcingle to go through, and an iron ring at the other end one and one-half inches in diameter. Pass the chain through the iron ring, pass ankle strap through each end of the chain and buckle them around the ankles. Put a surcingle around the horse just in front of the hips, and then pass it through the loop of the long strap and buckle.

This arrangement will allow the horse to step around in the stall freely, lie down and get up, but he cannot kick to do any damage, and I never knew a horse to get himself tangled up in it. The length of the long strap must be varied to suit the height of different horses. Of course, the office of this strap is to hold up the center of the chain sufficiently to prevent the horse from getting tangled in or stepping on it. This method works well, and no harm if properly adjusted, and it is worthy of trial on horses that kick so as to injure the stall or themselves. A horse wearing this rig should have exercise daily for obvious reasons.

### Train the Young Colts.

There is nothing gained, but quite to the contrary, by delaying the training of the young colts as soon as they are weaned. The year olds may even be used to light work, and with the very light and easy draft carts now in common use they may be made to earn their feed, at least, by putting them in harness to one of these. It is the best way to pet the young things, giving them in this way all possible confidences in their attendants, and thus avoiding the necessity of breaking them by force afterward.

Thus they will grow into their work by degrees, learning as they grow that there is nothing to be feared in their association with their keepers. The first thing to be taught is that they are under control, and this is learned by haltering them when they are but two or three weeks old, thus putting them under restraint before they have known what freedom is.

### Let the Feet Rest.

In every farm account published, the bill of the blacksmith takes a prominent place. Most of it is for shoeing the horses. It is a question if most of this expense might not be avoided, with profit every way. Why does the horse need shoes while at work in the fields? There is no reason for it. Indeed, it will be a relief to the pinched and sore feet of the animal to have the shoes removed, quite as much as it is to the frolicsome farmer's boy to kick off his heavy shoes and dance on the cool, soft, newly plowed soil with his bare feet. And if the roads are not stony, the horse will enjoy the same freedom while traveling on them the greater part of the year.

The prevalent diseases of horses exist mostly in the feet. "No foot, no horse," is a trite but true adage, and to save the feet will add years to the useful life of the farm teams. It is unquestionable that farmers submit themselves to losses every year of millions of dollars by the mistake of keeping their horses always shod. The unshod hoof soon grows hard, as does the sole of the barefooted boy who gambols on the stony roads, where the carefully shod boy must creep painfully on his tender feet. It is the same with horses, as it is, too, with the cows and oxen, and the use of shoes in the summer for the field-worked teams is a waste of money and a burden on the animals.

### Beans for Horses.

Beans form a striking illustration of the principle that the nourishing or strengthening effects of the different articles of food depend more upon some peculiar property which they possess, or some combination which they form, than in the actual quantity of nutritive matter. Beans contain but 570 parts of nutritive matter, yet they add materially to the vigor of the horse. There are many horses that will not stand hard work without beans being mixed with their food. Horses that show a tendency to purge during a journey avoid that habit by having a few beans mixed with their other food, as they are slightly astringent. There is no traveler who is not aware of the spirit and continuance of his horse, whether he allows or denies it beans on his journey. They afford not merely a temporary stimulus, but they may be daily used without losing their power or causing exhaustion. They are indispensable to the hard-worked coach horse. They should never be fed to a horse whole but crushed. This will make a material difference in the quantity of nutriment that will be extracted.

### Preserving Harness.

Whether harness is in good condition after six or eight years of hard service, or is good for nothing after two years, depends on the care taken of it. If well oiled and cleaned after exposure to storms, the harness lasts until enough is made out of it to buy another. It is a good plan to keep two harnesses—one for fine weather and the other for use when it is rough and wet. We saw only the other day a harness that its owner assured us had been used for the best during eighteen years, and it was still in good condition. In that time many farmers would be obliged to buy two, if not three, harnesses. It is possibly in facts like this that some farmers may find abundant reason for their complaint that farming does not pay.

The country's railway tonnage is something stupendous. The whole of the tonnage on the oceans of the world last year aggregated 140,000,000 tons; the tonnage of the railway companies of the world, carried 100 miles, aggregated 1,400,000,000 tons. There are 400,000 miles of railroad in the world, of which 180,000 are in the United States. Of the 1,400,000,000 tons carried 100 miles last year on the railways of the world, 800,000,000 tons were carried on the railways of the United States. Take the 600,000,000 tons carried 100 miles on the railways of the world outside of the United States, and add to it 140,000,000 carried on the ocean in the commerce of the world upon the seas, and still in the 800,000,000 tons carried on the railways of the United States there are 60,000,000 tons more than on all the railways of the world outside of the United States and in all the ocean commerce of the world put together. This traffic is carried by the American railway at an average of eight mills per ton per mile; the railways of Great Britain charge two cents and eight mills; France, two cents and two mills; Germany, two cents and six mills; Italy, two cents and five mills; Russia, two cents and four mills. The internal commerce of the United States makes our country the most wonderful market this globe has ever known.

## THE APIARY.

### Moving Bees.

Some of our readers may desire to move bees to new locations, either after purchase or to get the insects away from the fruit-drying grounds or for other reasons. In the *Rural Californian* Professor A. J. Cook writes on the subject. He says in moving bees there are three things to consider: The bees should be in the hive when the latter is closed preparatory to moving; the hives should be so ventilated that no bees would be smothered in transit, and care must be exercised that the bees remain in the hive after they are moved, and do not return to the old location.

If bees are closed in at nightfall they will practically be all in the hive, though occasionally a few remain out over night. The best way then is to close the hives after the bees have ceased flying for the day. In case it is necessary to close the hive during the day, it may be done easily, and all the bees secured. We have only to close the entrance for a minute or two, and rap on the hive with a stick or hammer until the bees are thoroughly frightened and commence eating, then open the entrance but continue the pounding for ten or twelve minutes till the bees cease coming in from the field, when the hive is closed and ready for transportation. In this way all the bees are surely secured to the hive.

The matter of ventilation is easily accomplished. If the bees are to be moved but a short distance, and it can be done in the cool of the evening, there will be no need of any ventilation other than covering the usual entrance with wire gauze. To do this easily and quickly we should have the C. C. Miller closer. This is made by tacking a strip of wire gauze on to a piece of lath or other similar strip, which must be a little longer than the entrance of the hive, so that the gauze shall project an inch below the piece on one side for its whole length. Then drive two or three small wire nails just through the strip. This is now ready for use. When we wish to close the hive place the strip just above the entrance so that the gauze projecting below shall close this opening, and secure it by driving the three projecting nails into the hive. It is well to have a few such closures about the apiary ready for use. In case we move the bees far or in the heat of the day we must remove the whole top and cover with wire gauze, or in case we have box hives, turn the same bottom up and cover entirely with the gauze. When bees are shut in the hives they should never be exposed to the direct rays of the sun. Bees shut in a hive with too little ventilation, and excited by heat or continual disturbance, will die very soon. Of course in moving bees the frames should be fastened so that they cannot move, either by tacking the ends or by pressing them tightly with a board nailed to the hive above the frames.

To be sure that the bees will remain with the hive and not return to the old location, we must remove them a mile or more, or else take special care. If we wish to move them but a short distance, we may move a foot or so a day till they are at the desired place. If we wish to move the apiary or a part of it far—from a few rods to a half mile or so—they should be shut in by the pounding method already described, moved, then disturbed again by pounding two or three minutes, when they may be liberated. I would also place the hive in an opposite direction from that previously occupied, and lean a board against it over the entrance, or place a bush or box close in front so as to warn the bees of the changed conditions, and cause them to mark their new position before they fly away. If these precautions are taken few bees will return even if moved but a few rods. Two or three weak colonies or nuclei in the old bee yard will capture these few returning bees, if any there be, and these latter may be moved in the same way. I have moved my whole apiary two or three times, once this season, in this manner. Of course in moving bees they should be jarred as little as possible, as rough handling may move the frames or break out the newer or poorly fastened combs. Spring wagons, or a wagon with much hay or straw, on which to place the hives, should always be used.

### Fighting Weevil in Warehouses.

TO THE EDITOR:—Will you kindly advise us, through your columns or otherwise, how we can clear our granary of weevil? We can get under the main floor of granary, but have two sheds on either side without any floors. Your early reply will very much oblige us.

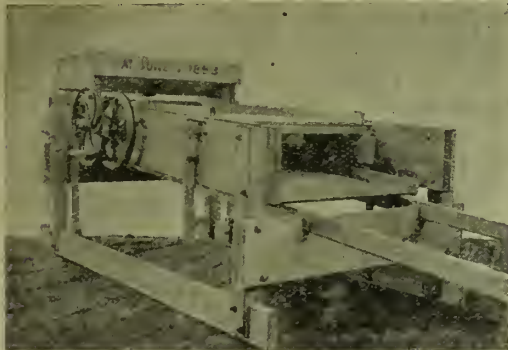
San Jose.

FARMER.

[When the warehouse can be made tight, and there is no danger from lighting the gas, carbon bisulphide vapor (such as is used in squirrel killing) is the most effective means of killing all insect life. Where the building cannot be made tight (as is usually the case), empty and clean the building most thoroughly, let in all the light and air possible for days or weeks and spray every inch of the interior with fresh lime whitewash, filling cracks and crevices as much as possible.]



## THE BURRELL PRUNE MACHINE.



**A New Process for  
Cutting the Skins  
of Prunes.**

**NO FIRE; NO HOT WATER; NO LYE.**  
Cleans, Cuts and Spreads the  
fruit at one operation.

**SIMPLE, STRONG, DURABLE,  
CHEAPER AND BETTER.**

**Letters from Persons who  
have used the Burrell  
Prune Machine:**

OAK BLUFF, SANTA CRUZ CO., CAL., April 15, 1895.  
Mr. BURRELL—Dear Sir: Allow me to say that your pricker has given me more than satisfaction in its work, being a great improvement on the old method of dipping, both in the greater amount of work done in a given time, and the facility with which it is done. And I feel assured that where there is a large quantity of prunes to be handled, it will pay for itself in a very short time, as well as leaving the prune in a far more healthy condition; it not having been treated with lye. Wishing you every success with your really valuable invention, I remain, Respectfully yours,  
ROBT. MOORE.  
Firm of Mattern & Moore, 25 New Montgomery St., S. F.

SAN JOSE, April 30, 1895.  
Mr. J. B. BURRELL—We have, during the past season, received many lots of "pricked" prunes. They have in all instances been mingled with dipped prunes and no distinction made.  
SANTA CLARA COUNTY FRUIT EXCHANGE, by PHILIP HERSEY, Manager.

PORTERVILLE, Feb. 1, 1895.  
Mr. J. B. BURRELL—Dear Sir: The past year being my first experience in drying prunes, I looked forward to the work with some degree of fear as to the result. My crop weighed out 26 tons when cured, and was handled with perfect satisfaction. After curing my crop, I had occasion to visit at a neighboring ranch, where they were using the dipping machine, and I want to say right here, my pricking machine is not for sale. I sold my prunes ungraded for 4¢ cts. f. o. b., sacks furnished. Yours truly,  
GEORGE T. FROST.  
[Other letters in next week's RURAL PRESS.]

The Burrell Prune Machine is manufactured and sold by

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**W. C. ANDERSON,**

## Horticultural Supplies.

—MANUFACTURER OF—

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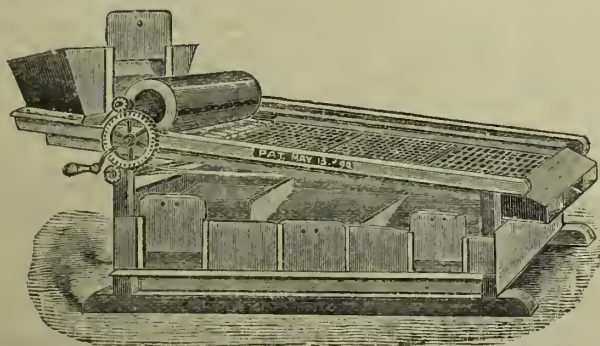
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♦♦♦ DRIED APRICOTS AND PEACHES can be graded by the ♦♦♦

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ALL FRUIT EXCHANGES  
USE THEM.



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♦♦♦ As well as PRUNES and WALNUTS. ♦♦♦

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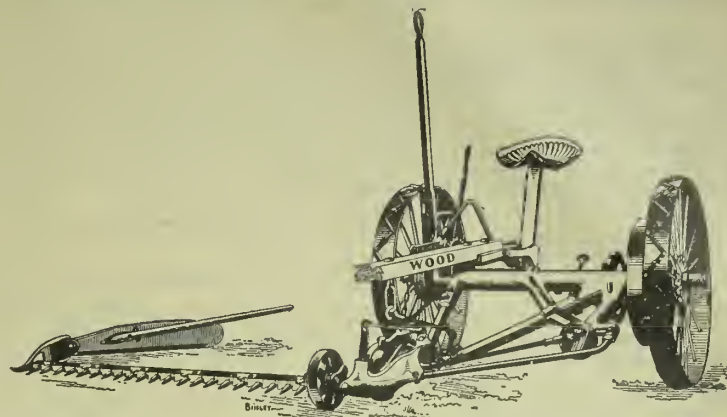
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An 1895 Machine.

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**GOOD!**

**AHEAD!**

Steel Drive Wheels, Steel Frame, Steel Shafts, Steel Knife Head, Steel Jaws for Pitman, adjustable; Steel Wrist Pin, self-oiling; Brass bearings; Eye-Winker Oilers, dust proof; Serrated Guard Plates; "Wohler" Track Board; Spring, Foot Lift and Cutter Bar, acts when wanted, at other time resting. Adds no extra weight to right hand drive wheel. Other improvements described in catalogue. Send for it.

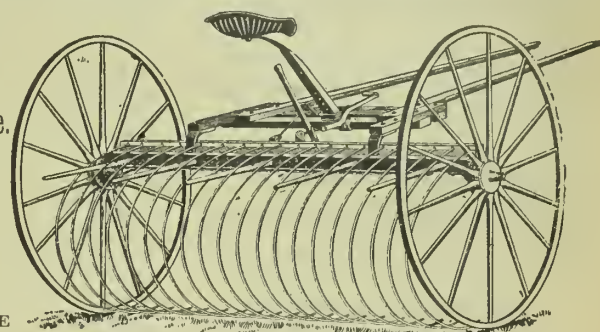
**ALL GOOD.**

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If you want the GENUINE  
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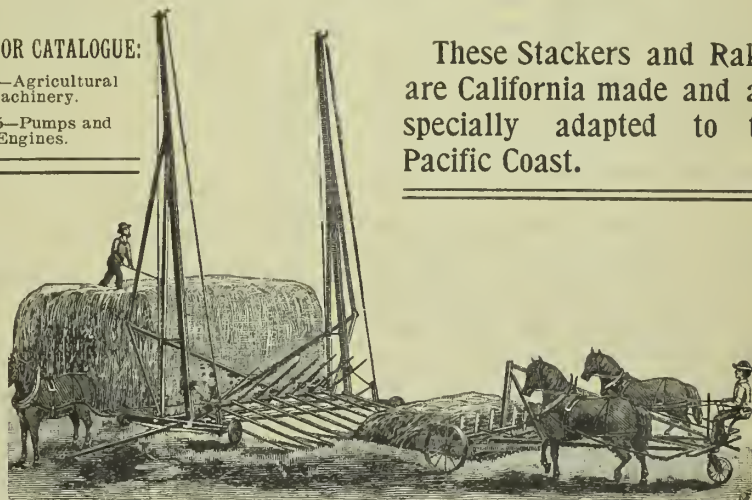
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## Jackson's Improved "Eclipse" Stacker and "Acme" Rake.

**NOTICE.**—We have discontinued our Sole Agency for the "Eclipse" Stacker and "Acme" Rake, heretofore controlled by the Deere Implement Company, of San Francisco; and they will no longer represent us.

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IRON, CUT, PUNCHED AND FORMED, AND TOOLS SUPPLIED FOR MAKING PIPE ON THE  
GROUND WHERE REQUIRED.

**309 to 317 Market Street, San Francisco,**



## THE HOME CIRCLE.

## Unanswered Prayers.

Like some schoolmaster, kind in being stern,  
Who hears the children crying o'er their slates  
And calling, "Help me, master," yet helps  
not,  
Since in his silence and refusal lies  
Their self-development, so God abides  
Unheeding many prayers. He is not deaf  
To any cry sent up from earnest hearts;  
He hears, and strengthens, when He must  
deny.

He sees us weeping o'er life's hard sums;  
But should He dry our tears, and give the key,  
What would it profit us when school were  
done  
And not one lesson mastered!

What a world  
Were this if all our prayers were granted!  
Not  
In famed Pandora's box were such vast ills  
As lie in human hearts. Should our desires,  
Voiced one by one, in prayer, ascend to God  
And come back as events, shaped to our wish,  
What chaos would result!

In my fierce youth  
I sighed out breath enough to move a fleet,  
Voicing wild prayers to heaven for fancied  
boons  
Which were denied; and that denial bends  
My knee to prayers of gratitude each day  
Of my maturer life. Yet from those prayers  
I rose always re-girded for the strife  
And conscious of new strength. Pray on sad  
heart!  
That which thou pleadest for may not be given.  
But in the lofty altitude where souls  
Who supplicate God's Grace are lifted, there  
Thou shalt find help to bear thy future lot  
Which is not elsewhere found.

—Ella Wheeler Wilcox.

## The Wooing of Betsey.

"How they do it I can't imagine," said the man from over Sinnemahoning way. "How they just lay back and think it all up and then go and do it is a good rods beyond me. Bears, I mean. Sinnemahoning bears. There are bears and bears, but when you come right down to bears that are bears, they grow only on Sinnemahone spread. They're always up to date. There are no back numbers among the Sinnemahoning bears. Nay, Nay!

"Is there anybody here who knows Toby Groo—Toby Groo of Lonesome Hollow? It doesn't matter. Only if any one wants to buy a snug little place the Toby Groo place is for sale. Easy terms, too. It was put on the market sudden, because Toby Groo went away sudden. All on account o' bears—Sinnemahoning bears. I met Toby when he was going away.

"Toby," said I, "what's—?"  
"It's all up!" said he. "All up with me!"

"Meaning Betsey?" said I.  
"The same!" said he.  
"What did it?" said I.  
"Education!" said he.  
"Education?" said I.

"There's nothing better to have in a district," said he, "than education, providing you deep it in bounds. It's all right among the rising generation of human folks, but when you come to spreading it among bears, you're carrying it too far. That's my opinion," said Toby Groo. "Education is what done me up with Betsey. Education among bears!" said Toby.

"And away he went from the Sinnemahone; and when a fellow has the heart to leave the Sinnemahone country you can make up your mind that he's done up bad. And what led up to it was this:

"The Bricktons are great people over on the Sinnemahone, you know. Great people. Been there for generations. The greatest one of the present generation is Betsey, although she isn't very big and isn't twenty years old yet. "Takin' her from the ground up," as Uncle Jabez Fiddler puts it, "an' considerin' of her fer gener'l serump-tionness, Sinnemahone can't turn out the ekal o' Betsey Brickton."

"I want to give you a pointer on Betsey, though, so that if any of you should happen to buy the Toby Groo place and go over on the Sinnemahone and be somebody, you'll know how to act and keep out o' trouble. Betsey has got a red head—an amazing red

head. Now I rather like that red head of Betsey's and a good many other folks do, but Betsey thinks it's a drawback. She is sensitive about it to a degree. In the soft Sinnemahone tongue she is tetchy as nettles about it. And Betsey is so full o' snap and fire that it isn't safe to mention toreh-lights or brieks or anything of that sort where Betsey is, for she takes it as a personal slur on her topknot, and the way she flares up and gives it to you is something to remember.

"It's a cortion to pepper-sass!" Jabez says.

"Everybody knows this, and is careful not to get Betsey's red head between them and her if they want to keep on the right side of her. Betsey Brickton is popular, though—so popular that there ain't a young chap on the Sinnemahone who wouldn't be happier than a bear in a bee tree if he could shine up to her and know that Betsey liked it. Toby Groo, so far as money went, was the best catch for a girl of all the young fellows on the Sinnemahone spread—not bad-looking, and not much over twenty-two. But he wasn't over-popular, because he was what Uncle Jabez calls 'a leetle high in his dealin's,' and rather inclined to get the best end of a dieker, even if he had to stretch a point. For all that, old Billy Brickton—Betsey's father—got it into his head some time ago that Toby Groo's money would be a good thing to have in the Brickton family, and so he did his best to help Toby get on the right side o' Betsey, Toby being not only willing, but more than eager. He was crazy after Betsey.

"All the same, Betsey didn't care for Toby not a little bit, nor for any one else in particular. Toby kept pestering Betsey to marry him, and her father talked her almost blind about it, until one day a month or so ago, after Toby had asked her for the nine hundredth time if she'd marry him, she snapped out:

"Yes!"  
"When?" said Toby, tickled about to death.

"When I find a bear that can spell my name!" said Betsey.

"Then Betsey laughed and laughed, for she judged that she had settled the business then and there, and Toby went away glum and away down in the mouth.

"If none of you fellows know Barnaby Beestuffer of Sinnemahone, there is a large waste place in your life. Barnaby Beestuffer is a citizen to whom all Sinnemahoning points with pride. He has genius such as could only have germinated, sprouted, grown and blossomed on the storied Sinnemahone. Barnaby has a little clearing, but he scorns toil, and devotes all his time to taming bears and snakes and coons and wildcats and porcupines, and such indigenous products of the Sinnemahone soil, and teaching them tricks and eapers. About the time that Betsey Brickton told Toby Groo what'd have to happen before she'd marry him there was a show in the hall over to the county seat, and Barnaby went over to see it. One of the actors was an educated pig. It could play eards, spell out things by stringing little blocks on the floor with letters painted on 'em, and do lots of other amazing things. The spelling took Barnaby's eye more than anything else the pig did.

"Pigs kin l'arn to do that, kin they?" says Barnaby. "Then I'll bet a farm that b'ars kin l'arn to do it, too, an' durn quick, an' I'll l'arn 'em!"

"When Barnaby got back home he started right in to teach one of his young bears to spell as well as the learned pig could. One day as he was practicing his bear on a lesson, Toby Groo happened to be going by Barnaby's clearing. Barnaby was feeling pretty sore against Toby on account of a little dieker in steers they'd had a few days before, in which Toby had got a good deal the best of Barnaby.

"Cheated the consarned eyes out of him!" Uncle Jabez said.

"But Toby didn't mind a little thing like that, and he stopped at the clearing to see what was going on between Barnaby and the bear. He hadn't

watched the performance long before an idea struck him and almost knocked him over.

"What are you doing, anyhow, Barnaby?"  
"Givin' my b'ar his spellin' lesson," said he.

"Can you teach him anything you want to?"

"Bet ye I kin!" said Barnaby.

"Could you teach that bear to spell Betsey Brickton?" said Toby, turning hot.

"Barnaby had heard all about the answer Betsey had given Toby, and knew at once Toby's little game.

"Kin I l'arn that b'ar to spell Betsey Brickton?" said Barnaby. "I kin fer money."

"Can you teach that bear to spell Betsey Brickton for ten dollars?" said Toby.

"I kin l'arn that b'ar to spell Betsey Brickton for twenty dollars, spot cash," said Barnaby.

Toby tried to get Barnaby to do it for fifteen dollars, but Barnaby stuck out for twenty, and Toby made a bargain with him. When the two weeks were up, Toby went over to Barnaby's and was delighted to find that the bear could lay out the blocks that spelled Betsey's name, and could do it in short order without a skip or a break.

"He danced for joy an' felt so rip-pin' good," says Barnaby, "that I feel like kickin' myself all around my clearing an' then rollin' round in a bull-pen full o' porcupines 'cause I didn't tell him I'd hef ter hev five dollars more!"

"Next day Toby drove to the Brickton place.

"Betsey," said he, "don't you want to ride over and see Barnaby Beestuffer's menagerie? It's worth seeing."

"Betsey said she'd just as lief as not, and she got in the wagon and went along. She was tickled all to pieces at the cute things the animals and the snakes did, and Toby said:

"That was pretty hard lines you held me to about marrying, wasn't it, Betsey?"

"Think so?" said Betsey, laughing. Oh, I don't know! I didn't want to hurt your feelings by saying No, plump out," said she.

"I suppose you'll stiek to what you said about marrying me?" said Toby. "If you see a bear that will spell your name, you'll stiek to what you said?"

"Certainly," said Betsey. "Why not?"

"Then Toby nodded to Barnaby, and Barnaby nodded to the bear. The bear jumped for a pile of blocks that lay on the ground, and the next second put a big letter B at Betsey's feet.

"I guess Betsey must a-begun to smell a rat," Barnaby says, "fer when she see the letter B she sort o' turned pale."

"The bear followed the B with an E, and then dropped a T after the E, and kept on putting down the letters till he had Betsey spelled out as proper as Betsey could have done it herself. Betsey got cold and shivery, and had to take hold of the fence to steady herself. Toby stood by, grinning and gloating. Then the bear brought out another B. The second name was begun right, and it kept on right. Betsey couldn't keep her eye off the proceeding, although she saw the bear sealing her fate, letter by letter. B-R-I-C-K-T-O the bear laid down, and Betsey was so near fainting that she grabbed both hands on the fence, and Barnaby jumped to catch her if she fell.

"Only one letter more!" Toby said, "and the strain'll be over, Betsey. And then you and I'll get married!"

"The bear put down the last letter. It wasn't an N. It was a P. And there was spread out in a line of big black letters that anybody with half an eye could read, 'BETSEY BRICKTOP!' Betsey's face quit being white in a second, and flashed as red, almost, as her hair was. She turned on Toby, and Barnaby says that he actually saw fire shoot out of her eyes. Nobody knows what she would have done to Toby, because he didn't wait to have it done. He jumped the fence and into his wagon, and away he went. And that is why, as near as the facts can be got at,

the Toby Groo place is for sale, terms easy.

"They say, over on the Sinnemahone, that Barnaby Beestuffer, seeing a chance to get even with Toby on the steer dieker, had educated two bears and rung the wrong one in on Toby when the time came. Barnaby doesn't deny it nor admit it, but when any one charges him with it he just sits and grins. But don't you wonder at those bears, those Sinnemahoning bears?—New York Sun.

## Mother.

All that I am my mother made me.—John Quincy Adams.

Nature's loving proxy, the watchful mother.—Bulwer.

All that I am, or hope to be, I owe to my angel mother.—Lincoln.

Let Francee have good mothers, and she will have good sons.—Napoleon.

The future destiny of the child is always the work of the mother.—Napoleon.

I would desire for a friend the son who never resisted the tears of his mother.—Lacretelle.

If there be aught surpassing human deed or word or thought it is a mother's love.—Marchioness de Spodara.

If you would reform the world from its errors and vices begin by enlisting the mothers.—C. Simmons.

Say to mothers, what a holy charge is theirs; with what a kindly power their love might rule the fountains of a new-born mind.—Mrs. Sigourney.

Unhappy is the man for whom his own mother has not made all other mothers venerable.—Richter.

## All a Mistake.

Two colored men, both of whom were in a hurry, turned the corner of Third and Green streets last evening a little after dusk and ran into each other with considerable force. Their heads struck together, and, though both were hard, it was a case of diamond cut diamond, and both were hurt. They backed away, glaring at each other through the dusk, with tears in their eyes, and began to swear.

"Whut does yoh mean by runnin' along into other folks wif yoh eyes shut?" said one. "I've got a mind to smash yoh face."

The other man retorted with an oath, and a fight seemed inevitable.

Then the man who had spoken first, and who happened to be the smaller one of the two, peered forward and said, rather softly: "Whut, am dat you, Misser Johnsing?"

They shook hands, and then the smaller man said: "Fore de Lawd, Misser Johnsing, I done took yo' foh a white man when I was a-swearin'." And so the trouble was explained away and all malice was over.—Louisville Commercial.

A Dublin docter recently sent in a bill to a lady, which ran thus: "To euring your husband till he died."—Exchange.

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40 Years the Standard.



## The Tee-hee Girl.

I know a little maiden, but really, on my word,  
You would sooner think this person was a  
Tee-hee bird.  
For no matter what you say,  
If it's sad or if it's gay,  
This silly maiden answers you with "Tee-hee-he,"  
With a "Tee-he, tee-he, tee-he-he."

She's quite a pretty little girl, with bright  
and smiling eyes,  
And, in some things, I understand that she  
is very wise.  
But though she knows her letters,  
No matter what her betters  
Or her elders may remark to her, this little  
maiden, she  
Is sure to end her answer with a "Tee-hee-he,"  
With a "Tee-he, tee-he, tee-he-he."

If you tell her that your pocket is just stuffed  
all full of toys,  
If you tell her you've a headache and she must  
not make a noise,  
If you tell her she's your pride,  
Or if you scold and chide,  
It really is the same to her so far as I can see,  
For her answer is a giggle with a "Tee-hee-he,"  
A "Tee-he, tee-he, tee-he-he."

I have heard this little maiden say that she  
was very tired;  
I have heard her ask for lots of things she very  
much desired;  
But to everything she uttered,  
Or mumbled forth or muttered,  
She tackled that senseless giggle that is  
quite devoid of glee—  
That foolish little habit of a "Tee-hee-he,"  
A "Tee-he, tee-he, tee-he-he."

I sometimes feel quite worried lest an elf of  
whom I've heard  
Should come along and change this girl into a  
Tee-hee bird;  
When, in all sorts of weather,  
With each curl turned to a feather,  
She'd have to sit the livelong day alone upon  
a tree,  
Just calling out to folks below her "Tee-hee-he,"  
Her "Tee-he, tee-he, tee-he-he."  
—Ella Wheeler Wilcox in St. Nicholas.

## She Is No Novelty.

The question of woman's supremacy is not a new one. In Rome, under the empire, a tribunal of women was established to decide questions regarding luxury and etiquette. The Emperor Heliogabalus consulted this assembly frequently. They decided questions of precedence, the number and state of females at court, upon the style of carriage the emperor should ride in, whether sedan chairs should be ornamented with silver or ivory, and contested the rights of man with an intelligence worthy of the present time. It was a veritable senate of fashion, was approved of by wiser men than Heliogabalus, and was re-established and maintained by his successors. The admission of woman's right to govern does not always signify an advanced state of society, as will be seen from the following account of a small state in Java, between the towns of Samarang and Bantam, known as the kingdom of Bantam. In regard to its form of government and the manners and customs of its inhabitants, it far exceeds the wildest dreams of feminine minds. From time immemorial Bantam, though tributary to Holland, has been governed by women. The sovereign is a man, but the fact scarcely counts, as he is subject to a council of three women. High dignitaries, officers, and all the court attendants are, without exception, women, who see that the men are employed in agriculture and commerce. The king's body-guard is composed of a corps of women soldiers, who ride astride their horses like men and handle a short, sharp lance with dexterity. They carry a rifle, too, with ease, and aim and fire with accuracy at full gallop. The oldest son of the king succeeds to the crown, but if the king dies without male heirs 100 women, specially appointed, meet and select one of their own sons by vote and proclaim him the legitimate sovereign. In several villages of Finland the woman has authority, for a religious sect exists there whose disciples are forced, when about to marry, to take a vow to submit to the wife in all things. The women choose one woman for their governing head, whose duty it is to see that the men behave themselves, and to punish them if they transgress.

## Fashion Notes.

A graduation gown is as important as any gown that a woman ever buys, and ranks only after her first ball gown or wedding.

It is no small matter to choose a costume that will be becoming alike to a dark girl, a fair girl, a stout and a thin girl, and yet it is the accepted rule the graduating class shall all dress alike, and to solve the problem of a gown that will be satisfactory to all is by no means an easy task. When so many gowns are to be made, exactly alike, there should be some saving to all concerned, for it is more of a wholesale than a retail affair.

Fortunately, it is almost a fixed rule that the color is white. There may be sashes, bows and trimmings of other colors, but the gown itself is to be pure white. Simple and inexpensive materials are the best for this purpose. While it is desirable the gowns should be as dainty and smart as possible, anything elaborate or over-trimmed, in the least suggestive of an evening gown, would be quite out of place.

There are many wash fabrics which are excellent for graduation gowns. June days are bound to be hot, and if the weather be fine there is nothing prettier than a muslin. Organdie, cambric, dotted Swiss muslin and a thousand and one others give opportunity of a wide choice. Twelve yards of the wide goods are sufficient, and the cost is trifling. If the waist is lined the lining should be cut decollete, so that there is only the sheer muslin over the neck and arms. Silkslips are very much the fashion this season, but an under petticoat of saten, or even cambric, is effective and cheaper.

A pretty and satisfactory model for a skirt is last year's, made with wider pieces in the back and both gathered and box plaited into the band just at the back. This gives a narrow look to the hips and makes the skirt stand out better than any other. Two small bias ruffles, trimmed with narrow valenciennes edging, or one deep one makes a good trimming, which can be elaborated by rows of insertion an inch wide. Full flounces on a skirt are a great addition to any wash fabric, for in itself it has not stiffness enough to stand out well from the feet. A tiny steel or feather bone run through the hem of the front and side breadths is also a good addition.

The waists may be plain or elaborate, as the girls elect. A pretty model is with bands of insertion put in in rows to form a yoke, and each band edged on either side with the same narrow lace as on the underskirt. Another pattern, with the insertion put in horizontally, is also effective and becoming. The sleeves of the leg of mutton shape are not so much used as those that have the full puff to the elbow, and from elbow to wrist are finished like the yoke, with the bands of insertion and lace.

The "findings" of a dress of the present day are a large item. It takes many yards of hair cloth to line a gown throughout, and then there are the thin sheets for the bottoms of dresses and edges of full basques and coats. Grass cloth can be bought as low as nine cents a yard, and for the lighter goods will do as well as the more expensive hair cloth, which is necessary for heavy materials, having more body than the grass cloth.

The lighter summer gowns will be much trimmed with ribbons, jabots of lace, etc. Some of the latest creations have many seams, each outlined with ribbons ending in a loop and end. A few of the skirts are box-plaited, but these are not allowed to flare at the hip. They, however, diverge greatly below the knees.

Shoes grow narrower. We have gotten to the "needle toe." Low shoes with leggins and gaiters are much worn. Fancy shoes are of perforated leather over skins of a different color. They are, however, excepting in the quieter tones, only for the more fortunate sisters who own their own carriages.

## Gems of Thought.

Education begins the gentleman, but reading, good company and reflection must finish him.—Locke.

Apelles used to paint a good housewife on a snail, to import that she was a home keeper.—James Howell.

Man argues woman may not be trusted too far; woman feels man cannot be trusted too near.—Junius Henri Browne.

The passion for praise, which is so very vehement in the fair sex, produces excellent effects in women of sense.—Joseph Addison.

Every man who rises above the common level receives two educations; the first from his instructors; the second, the most personal and important, from himself.—Gibbon.

As I believe universities are the best places in the world for those who can profit by them, so I think for the idle and self-indulgent they are about the very worst.—Dr. Arnold.

A fool can no more see his folly than he can see his ears.—Thackeray.

Adversity borrows its sharpest sting from our impatience.—Bishop Horne.

Find your niche, and fill it. If it be ever so little, if it is only to be hewer of wood or drawer of water, do something in this great battle for God and truth.—Spurgeon.

To write or talk concerning any subject without having previously taken the pains to understand it, is a breach of the duty which we owe ourselves, though it may be no offense against the laws of the land. The privilege of talking and even publishing nonsense is necessary in a free State; but the more sparingly we make use of it the better.—Coleridge.

## Scientific Facts.

In the fiords on the Norway coast the clearness of the water is wonderful. Objects the size of a half dollar may be seen at a depth of twenty-five or thirty fathoms.

Wheat can be grown in the Alps at an elevation of 3600 feet, in Brazil at 5000, in the Caucasus at 8000, in Abyssinia, at 10,000, and in Peru and Bolivia at 11,000.

Dr. Alexander, the officer of health of the poplar district, states that several recent cases of typhoid fever have been traced to the eating of watercress which has been grown in polluted water. Everybody should see that watercress and celery are well washed before being eaten.

In ordinary chemical analysis the one-hundred-and-twentieth of a grain approaches very nearly the lowest limit of practical determination. The spectroscope, however, is so sensitive that it can tell the presence of a substance when the quantity is nearly two million times less than this, or one two-hundred-and-forty-millionth of a grain.

The dangers of watching solar phenomena, even with the partial protection of colored glasses, have been pointed out by Dr. George Mackay of Edinburgh. Galileo lost his vision in this manner. Sir Isaac Newton's retina was permanently injured, and Dr. Mackay has himself met with not less than 17 cases of impaired sight as a result of viewing with unprotected eye the eclipses of 1890 and 1891.

Charlie: "Mamma, mayn't I go out into the street for a bit? The boys say there is a comet to be seen?"  
Mamma: "Well, yes, but don't go too near."—Dallas Times-Herald.

## DOMESTIC ECONOMY.

## Recipes.

**EGGS WITH CREAM.**—Hard-boiled eggs are to be shelled and cut in halves, the latter arranged, cut side downward, upon a buttered dish or platter. A rich cream sauce properly flavored is then to be turned over or around the eggs, which should be served immediately. Finely chopped chicken, turkey or ham may be mixed with the sauce if relished.

**CHEESE OMELET.**—Four well-beaten eggs, half a teacup of grated crackers, three tablespoonfuls of grated cheese. Pour into a hot pan and fry.

**TOMATOES AND RICE.**—Wash a cupful of rice. Have two tablespoonfuls of butter over the fire in a frying pan, and when very hot stir the rice in it. Stir it continuously until it is a golden brown, then add to it a cupful of tomatoes. Stir it well, cover and let it cook gently until the rice is tender; add salt and a little pepper.

**SUNSHINE CAKE.**—Whites of eleven eggs, yolks of seven, one and one-half cups of fine granulated sugar, sifted; a teacupful of flour and a level teaspoonful of cream of tartar sifted together three times. Beat the whites to the stiffest froth; add the yolks well beaten; whip in the sugar quickly and lightly, using a wire spoon; add any flavoring preferred; sift in the flour and mix it in as lightly as possible; do not beat, but turn it at once into an angels' food pan (ungreased). Bake in a moderately hot oven for from forty to forty-five minutes; remove from the oven; turn upside down and allow the cake to remain in the pan until perfectly cold.

**BAKED BANANAS.**—Peel the fruit and cut it in halves lengthwise. Lay these strips in close order in a baking pan, stew with sugar and some bits of butter on them, and bake it in a moderate oven for about half an hour. The fruit should be basted while baking with a few spoonfuls of butter and sugar syrup and should come out glazed. Serve warm at the end of breakfast.

**TEA ROLLS.**—Scald a pint of milk and add one tablespoonful of sugar, one-half cup yeast, and flour to make a batter. Let this rise over night. In the morning add one-half cup of butter, one teaspoon of salt, the whites of two eggs well beaten. Mix this; knead well and let it rise; knead again and roll it three-fourths inch thick. Butter and cut out one-half and roll the other half over it, and let it rise till very light and bake. These are delicious and are well worth a trial.

**STUFFED DATE.**—A toothsome dainty for the tea table is a stuffed date. Cut the date open and remove the stone. Fill with chopped nuts of any kind and press firmly together.

## Humorous.

Man (at front door): "I want to see the boss of the house." Houser: "Walk right up to the second story back, and tell the nurse to show you the baby."—Presbyterian Journal.

"The nearest I ever came to being married," said the old bachelor, "was when a shopkeeper gave me a bad fifty-cent piece, and I went back and tried to get a better half."—Dispatch.

He (earnestly): "Now that we are engaged, Ethel, will you pray for me?"  
She: "Oh! no, George; I've been praying for you the last eight years. But now that I've got you I'll thank the Lord for you."—Truth.

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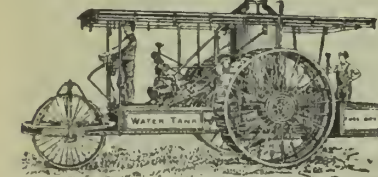
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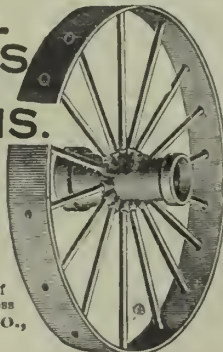
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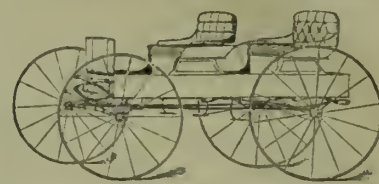
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S. F. MARKET REPORT.

Market Review.

SAN FRANCISCO, June 26, 1895.

**FLOUR**—We quote: Net cash prices for Family Extras, \$3 50 @ 3 60 per bbl; Bakers' Extras, \$3 40 @ 3 50; Superfine, \$2 35 @ 2 60 per bbl.

**WHEAT**—No. 1 Shipping Wheat is quotable at 92 1/2 @ 93 1/2 c per cwt for new and 90 c for old. Milling Wheat, 97 1/2 c @ \$1 per cwt.

**BARLEY**—Feed, fair to good, 58 1/2 @ 60 c; choice, 63 1/2 c; Brewing, 67 1/2 @ 75 c.

**OATS**—We quote: Milling, \$1 05 @ 1 10; Surplus, \$1 07 1/2 @ 1 12 1/2; fancy feed, \$1 01 @ 1 05; good to choice, 90 @ 97 1/2 c; fair to good, 87 1/2 @ 90 c; poor to fair, 80 @ 85 c; Black, nominal; Gray, 87 1/2 @ 85 c per cwt.

**CORN**—We quote: Large Yellow, \$1 05 @ 1 17 1/2; small Yellow, \$1 12 1/2 @ 1 20 per cwt; White, \$1 @ 1 10.

**BUCKWHEAT**—Quotable at \$5 @ 90 c per cwt.

**OILCAKE MEAL**—Quotable at \$25 per ton from the mill. Jobbing lots, \$27 50.

**COTTON SEED OILCAKE**—Quotable at \$24 per ton.

**MIDDLINGS**—Quotable at \$18 50 @ 19 50 per ton.

**BRAN**—Quotable at \$13 50 @ 14 50 per ton.

**GROUND BARLEY**—Quotable at \$14 50 per ton.

**HAY**—New Wild Oat selling at \$6 @ 7 50; Wheat, \$7 @ 10; Alfalfa, \$7 @ 7 50 per ton. We quote as follows, old: Wheat, \$7 50 @ 10 50; Wheat and Oat, \$7 50 @ 10 50; Oat, \$8 @ 10; Alfalfa, \$7 @ 8 50; Barley, \$7 @ 8 50; Clover, \$7 @ 8; Compressed, \$7 @ 9; Stock, \$5 @ 6 per ton.

**STRAW**—Quotable at 40 @ 70 c per bale.

**BEANS**—We quote as follows: Bayos, \$1 25 @ 1 50; Butter, \$1 50 @ 2 for small and \$2 @ 2 50 for large; Pink, \$1 25 @ 1 45; Red, \$1 @ 1 25; Lima, \$1 75 @ 5; Pea, \$2 75 @ 2 85; Small White, \$2 75 @ 2 85; Large White, \$2 60 @ 2 85; Blackeye, \$3 @ 3 50; Horse, \$1 25 @ 1 50 per cwt.

**SEEDS**—We quote as follows: Mustard, Brown, \$1 25 @ 1 75; Yellow, \$1 75 @ 2; Trieste, \$1 90 @ 2 00; Canary, 3 1/2 @ 3 1/2; Hemp, 3 1/2 c; Rape, 1 1/2 @ 2 1/2; Timothy, 5 1/2 @ 6 1/2; Alfalfa, 7 @ 7 1/2 c per lb; Flax, \$2 50 @ 3 c per cwt.

**POTATOES**—Quotable at 40 @ 75 c per cwt for new crop.

**GREEN CORN**—Quotable at 50 @ 75 c per sack and 10 @ 12 1/2 c per dozen for Vacaville; Alameda, 20 @ 22 1/2 c per doz.

**ONIONS**—Quotable at 65 @ 75 c per cwt. for Red and 75 @ 80 c for Silver Skin.

**VARIOUS**—We quote: Summer Squash, 20 @ 30 c for Vacaville; Bay Squash, large box, 30 @ 40 c; Cucumbers, 50 @ 65 c per box for Marysville; Bay, \$1 @ 1 25 per box; Asparagus, 75 @ 81 25 per box for ordinary and \$1 25 @ 2 25 for better qualities; Rhubarb, 30 @ 50 c per box; Tomatoes, \$1 25 @ 1 50 per box; String Beans, 20 @ 30 c per lb for common and 3 1/2 @ 4 1/2 c for garden beans; Refugee, 3 @ 4 c per lb; Wax Beans, 3 @ 4 c per lb; Green Peas, \$1 @ 1 25 per sack for garden; Turnips, 50 c per cwt; Beets, 60 c per sack; Carrots, 40 @ 50 c; Cabbage, 65 @ 75 c per cwt; Garlic, new, 3 @ 4 c per lb; Cauliflower, 50 @ 60 c per dozen; Dried Peppers, 13 @ 15 c per lb; Dried Okra, 15 c per lb.

**FRESH FRUIT**—Apples—Quotable at 50 @ 75 c per box for Green and 75 @ 80 c per box for Red. Apricots—Quotable at 40 @ 60 c per box for Royals. Berries—Gooseberries, 2 @ 2 1/2 c per lb; Strawberries, Sharpless, 3 @ 3 50 per chest; Longworth, \$5 @ 6; Raspberries, \$2 75 @ 3 per chest; Blackberries, \$2 50 @ 3 per chest.

**Plums**—Quotable at 50 @ 60 c per drawer for Royal Hative and 55 @ 40 c per drawer for Cherry Plums. Pears—Quotable at 25 @ 35 c per small box. Cherries—Quotable at 35 @ 75 c per box for red and black, and 35 @ 50 c for white; Royal Anne, 60 @ 75 c. In bulk, 4 @ 6 c for black, 4 @ 4 1/2 c for white, and 5 @ 6 c for Royal Anne.

**Currants**—Quotable at \$3 @ 4 per chest. Figs—Black, single layers, 35 @ 50 c per box; double layers 75 @ 81 per box. Peaches—Quotable at 40 @ 65 c in boxes and 50 @ 75 c in baskets.

**CITRUS FRUIT**—We quote: California Navels \$2 @ 2 50; Seedlings, \$1 @ 1 25; Mexican Limes, \$4 50 per box; California Lemons, \$1 @ 1 50 for common and \$2 @ 3 for good to choice.

**DRIED FRUIT**—Following are the prices furnished by the San Francisco Fruit Exchange. The figures presented represent carload lots, smaller parcels occasionally selling at slightly lower rates:

Apricots—Fancy Moorpark, 8 c; choice, do, 7 c; fancy, 7 c; choice, 6 c; standard, 5 1/2 c; prime, 5 c. Apples—Evaporated, 4 1/2 @ 5 1/2 c; sun-dried, 4 @ 4 1/2 c. Peaches—Fancy, 6 1/2 c; choice, 5 c; standard, 4 1/2 c; prime, 4 c; peeled, in boxes, 12 @ 13 c. Pears—Fancy, halves, 5 c; quarters, 4 1/2 c; choice, 4 c; standard, 3 1/2 c; prime, 3 c. Dried Grapes—1 1/2 c per lb. Plums—Pitted, 3 @ 4 c; unpitted, 1 @ 2 c. Prunes—Four sizes, 4 c. Nectarines—Fancy, 6 c; choice, 5 c; standard, 4 1/2 c; prime, 4 c. Figs—White, choice, 3 @ 5 c; black, choice, 2 1/2 @ 3 c. Raisins—In sacks (50 lb. boxes selling at 1 1/2 c per lb. higher): 4-crown, loose, 3 1/2 c; 3-crown, 2 1/2 c; 2-crown, 2 c; seedless, Sultanina, 3 c; seedless Muscatels, 3 c; 3-crown London Layers, \$1 40 per box in 20 lb. boxes; clusters, \$2; Dehesa, clusters, \$2 50; Imperial clusters, \$3; 4-crown, loose, \$1; 4-crown, loose, faced, \$1 15 per box.

**NUTS**—Chestnuts, 3 @ 5 c; Walnuts, 6 @ 7 c for hard shell, 7 @ 9 1/2 c for soft shell and 7 @ 9 1/2 c for paper shell; California Almonds, 9 @ 10 c for soft shell, 2 @ 2 1/2 c for hard shell and 6 @ 7 c for paper shell; Pecans, 3 1/2 @ 4 1/2 c for California and 4 @ 5 1/2 c for Eastern; Brazil Nuts, 7 @ 7 1/2 c per lb; Cocoanuts, \$1 50 @ 5 50 per 100; Pine Nuts, 20 c per lb.

**HONEY**—We quote: Comb, 9 @ 10 c; water-white, extracted, 5 1/2 @ 6 c; light amber, extracted, 5 @ 5 1/2 c; dark amber, 4 @ 5 c per lb.

**BEEWAX**—Quotable at 26 @ 28 c per lb.

**BUTTER**—Is steady and firm, with an upward tendency. Arrivals are not particularly heavy, but the demand is so very limited that there are large supplies on hand. Creamery—Fancy, 13 1/2 @ 14 1/2 c; seconds, 12 @ 13 c per lb. Dairy—Fancy, 12 @ 12 1/2 c; fair to choice, 10 @ 10 1/2 c; store lots, nominal.

**CHEESE**—We quote: Choice to fancy, 5 1/2 @ 6 c; fair to good, 3 1/2 @ 5 c; Eastern, 11 @ 12 1/2 c per lb.

**EGGS**—Quotable at 13 @ 14 c per dozen for store and 16 @ 17 1/2 c for ranch; Eastern, 15 1/2 @ 16 c.

**POULTRY**—We quote as follows: Live Turkeys—Gobblers, 10 @ 12 c; Hens, 10 @ 11 c per lb; Roosters, \$4 @ 4 50 for old, and \$5 @ 7 for young; Broilers, \$1 50 @ 2 50 for small and \$3 @ 3 50 for large; Frysers, \$1 50 @ 1; Her, \$3 50 @ 4 50; Ducks, \$3 @ 3 50 for old and \$2 50 @ 3 for young; Geese, 75 @ 81 per pair; Goslings, 75 @ 81; Pigeons, \$1 50 per dozen for old and \$1 50 for young.

**WOOL**—We quote spring: Year's fleece, San Joaquin, per lb. 6 @ 6 1/2 c; 6 to 8 months do, 6 @ 6 c; 6 to 8 months Calaveras and foothill, free, 8 @ 10 c; do, defective, 6 @ 8 c; Northern, good to choice, 12 @ 13 c; do, defective, 8 @ 10 c.

We quote Nevada spring: Light and choice, 9 @ 11 c; Heavy, 8 @ 10 c. HOPS—Quotable at 4 @ 6 c per lb. HIDES AND SKINS—Quotable as follows: Sound. Culls. Heavy Steers, 56 lbs up, per lb. 10 @ 9 1/2 c; Medium Steers, 48 to 56 lbs, 8 1/2 @ 9 c; Light, 42 to 47 pounds, 8 @ 8 1/2 c; Cows, over 50 lbs, 8 @ 8 1/2 c; Light Cows, 30 to 50 lbs, 8 @ 7 c; Stags, 17 to 30 lbs, 6 @ 6 c; Kips, 10 to 17 lbs, 6 @ 6 c; Veal Skins, 5 to 10 lbs, 6 @ 6 c; Calf skins, 5 to 10 lbs, 6 @ 6 c; Dry Hides, over 16 lbs, 19 @ 20 c; Dry Kips and Veal, 11 to 16 lbs, 14 @ 15 c; Dry Calf, under 4 lbs, 14 @ 15 c; Pelts, Shearlings, 10 @ 20 c each; do, short, 25 @ 35 c each; do, medium, 30 @ 45 c each; do, long wool, 40 @ 60 c each; Deer Skins, summer, 30 c; do, good medium, 15 @ 25 c; do, winter, 10 @ 15 c per lb; Goat Skins, 20 @ 35 c apiece for prime to perfect, 10 @ 20 c for damaged, and 5 c each for Kids.

California Fruit Sales.

CHICAGO, ILL., June 24.—The Porter Brothers Company sold to-day: Simonix Prunes, \$3.80; Tragedy Prunes, \$2.75 @ 3.50; Clyman Prunes, \$1.60 @ 2.45; Japan Prunes, \$2.45; Abundance Prunes, \$2.20 @ 2.25; Peach Plums, \$3.10; do, bxs, \$1.30; Claudis Prunes, \$1.95 @ 2.10; assorted, \$1.65 @ 2.65; Hatives, \$1.35 @ 1.75; St. Catherine's, \$1.65 @ 1.80; Brills, \$1.45; Cherry Plums, \$1.25; Strawberries, 85c; Apples, \$1.65; Cherries, 90c @ 1.45; Apricots, 85c @ 1.85; Peaches, 65c @ 1.25.

The Earl Fruit Company sold four cars to-day: Peach Plums, \$3.10; Clyman Plums, \$1.70 @ 1.90; Royal Apricots, 80c @ 1.25; Hale's Early Peaches, 85c @ 1.25; Alexander Peaches, 55c @ 1.10; Royal Anne Cherries, \$1 @ 1.50; Tartarian, \$1 @ 1.45; Black Republican, 80c @ 1.40; Bigarreau, \$1.30.

NEW YORK, N. Y., June 24.—The Earl Fruit Company sold two cars to-day: Royal Apricots, \$1 @ 1.25; Royal Hative Plums, \$1.15 @ 1.20; Hale's Early Peaches, 75c @ 1.10; Alexander, 45c @ 1.10; May Peaches, 55c; Oriental Peaches, 85c. California fast express refrigerator sold for \$1.75 gross.

CHICAGO, June 25.—The Earl Fruit Company to-day sold two cars of fruit: Royal Anne Cherries, 95c @ 1.45; Black Republican, \$1.30 @ 1.40; Black Tartarian, \$1.05 @ 1.40; Alexander Peaches, bad order, 60 @ 65 c; Briggs May Peaches, bad, 55c.

The National Fruit Association: Royal Apricots, 85c @ 1.15; Royal Hative Plums, \$1.50 @ 1.90; Satsuma Plums, \$2.45; Alexander Peaches, 50 @ 75 c; Clyman Plums, \$1.70 @ 1.90; Tragedy Prunes, \$2.35 @ 2.85; Figs, 90c.

NEW YORK, June 25.—Porter Brothers Company sold: Tragedy Prunes, \$2.90; Royal Hative, \$1.05; Tartarian, 90c @ 1.50; Royal Annes, \$1 @ 1.25; Bigarreau, 80c @ 1.20; Peaches, 80c @ 1.20; half boxes Pears, \$1.15.

The National Fruit Association sold: Royal Apricots, 70c @ 1.20; Alexander Peaches, 40c @ 1.45; Royal Hative Plums, \$1.10 @ 1.35; Clyman Plums, \$1.60.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING JUNE 11, 1895.

540,710.—ABDOMINAL SUPPORTER—Kate M. Baltzell, Oakland, Cal.  
540,951.—SAWING MACHINE—F. Costa, Carbonado, Wash.  
540,724.—INKSTAND COVER—H. J. Cowger, King City, Cal.  
540,783.—TENTERING FRAME—Caroline N. Eno, Pomona, Cal.  
540,857.—CAN OPENER—R. Franken, Pico Heights, Cal.  
541,045.—RAIL BRAKE—J. T. Hall, S. F.  
540,913.—METALLIC ROOFING—W. Hille, Alameda, Cal.  
540,665.—FARE RECEIVER—I. C. Houghton, S. F.  
540,666.—COIN ACTUATED LOCK—I. C. Houghton, S. F.  
540,864.—SPRINKLER—Frank Lewis, Pleasanton, Cal.  
540,830.—BUTTER MOLD—H. S. Maltby, Clarksville, Cal.  
541,014.—SPRING BED—B. F. Neely, Colton, Cal.  
540,868.—WATER HEATER—A. B. Newkirk, Los Angeles, Cal.  
540,844.—FAUCET—A. H. & T. A. Schluter, Oakland, Cal.  
540,764.—ARTIFICIAL LEG—M. Spring, S. F.  
541,056.—DISH CLEANER—M. Stone, San Diego, Cal.  
540,767.—CAN OPENER, ETC.—Wagniere & Silberstein, Los Angeles, Cal.  
540,930.—FINGER RING TWINE CUTTER—Jas. Wallace, Oakland, Cal.  
540,772.—PHOTO-TELEGRAPH—C. Willoughby, S. F.  
540,773.—FRUIT GRADER, ETC.—L. Wilsey, Arroyo Grande, Cal.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast Inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

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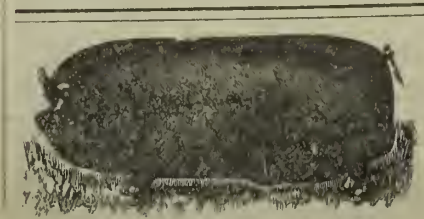
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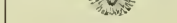
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## Patrons of Husbandry.

Observations by Mr. Ohleyer.

In times of progress and prosperity the need of co-operation is but little felt by the masses. Each individual feels able to take care of himself, to hoe his own row in the battle of life; but when adversity knocks at the door, in our isolation we feel four-fold our weakness. It has often been remarked that co-operation flourishes best under adverse conditions; that is to say, when we most feel a dependence on neighborly acts. It was in this condition the great rural population found itself thirty years ago, and which gave rise to the Grange movements throughout the North and South, the East and the West. Having apparently accomplished its purpose, that of restoring harmony and good feeling between all sections of our country, and thereby inaugurated a season of prosperity throughout the country unparalleled in its history, there seemed no further need of the late activity by the producers of the country, and they relapsed into something like their former lassitude, thus encouraging the reappearance of the enemy of rural prosperity. This enemy comes in the garb of co-operation, which is so much easier accomplished by politicians and tradespeople. The writer recently had the good fortune of listening to a very able address by an eminent speaker who dwelt largely on the value and power of co-operation. He recognized the fact of the rapid change in business methods from the isolate to the combine. He showed clearly how in latter years the individual was losing his identity in the corporate, and how these were controlling thought and action for the unorganized masses. The address was uttered to a graduating class, the speaker probably not having the slightest idea that he was promulgating Grange doctrine.

Of course it must be seen that with the growth of co-operation the non-co-operating becomes not only weaker in numbers but vastly weaker in standing and influence.

Combination, then, for mutual protection and advancement so generally practiced will cease to be slurred and ridiculed in the hands of the farmers and producers; and these may as well understand that the time is at hand for a closer and stronger combination among them than has ever existed. Our isolated condition and distance from the world's markets renders transportation easily controllable; even now, when the product of our fields bring fair to good prices abroad, our home prices are kept down by the increased freight charges. It is to be hoped that a more liberal policy will prevail, and that the California farmer may be encouraged to proceed in his attempt to live through the depression.

The indications, however, are not reassuring, and a better understanding and closer combination of Grange and farm interests is imperatively demanded. Former unhappy results should not now stand in the way. Much has been learned since those days, and notwithstanding some injury resulting to a few the masses were benefited by the effort, as it broke the then ocean freight ring, the money ring, the bag ring, the wheat ring, and other combinations that were consuming the profits of the farmers, and which was succeeded by an era of agricultural prosperity hitherto unknown.

It was co-operation that did it, and it will do it again if we are patient and firm. Remember, in union there is strength.

### A GOLDEN GLUT.

That was a significant dispatch from London last week saying the Directors of the Bank of England were debating the proposition to reduce their discount to 1½ per cent per annum. This shows a decline in the value of gold—that is to say, a reduction in its pur-

chasing power. This tendency was already observed in the advancing values of wheat and nearly all minor products of the fields. It is therefore unerringly evident that the pendulum of depression has swung beyond the "dead point," and is again on the ascendant. Valuable lessons may be drawn from the circumstance by grangers and farmers alike, as by a close inspection the cause of the universal depression may appear. I say universal, because the depression we deplore is by no means confined to our own country and people.

London is the financial center of the world. All borrowers of large sums sell their bonds in England, interest and principal payable in gold. New, and rapidly developing countries in the construction of railroads, cities, and the innumerable demands of a rushing people, drew too largely upon the future, or rather to a point that could not be sustained by home resources. The creditor seeing this, began to demand his interest more promptly, and with it the principal also as fast as due. This process created a rush of gold to the head center that has scarcely had a parallel in history. The amount remaining among the people became so valuable that half a dollar purchased as much wheat as a dollar did formerly, and so of other commodities unaffected by crop shortage. Thus, while the stampede of gold was unprecedented, the inflow to pay for the products of our farms became much reduced, and at a price that left no margin to the producer. But, as all streams running to one center would produce an unnatural condition, and the waters thus congested must return to a normal state, so the piling up of gold in the banks of London and other moneyed centers in the old countries dare not assume a permanent feature, for gold in disuse has no more value than has its weight in junk.

About the beginning of the year a writer in the *Pall Mall Gazette*, of London, asserted that in the banks of London alone were resting \$5,000,000,000, the property of depositors who dare not remove their hoardings except for the most approved securities.

Seeing a rising barometer, the hoarded gold seems again willing to enter the business world, and to furnish an incentive to labor, to progress, to confidence and general prosperity.

Being unschooled in finance, this is not written for the purpose of a guide to anyone, but merely for personal amusement during idle moments. However, it may just be possible that the source of the great depression may be found somewhere along the lines I have touched upon. If this be so, both the present nor the late National Administration can be held altogether responsible for the great depression which seems now so happily disappearing.

### CHICO AND SURROUNDINGS.

The writer, on a recent occasion, visited the city of Chico, in response to an invitation to attend the commencement exercises of the State Normal School at that place. The route and country is well known, lying between the two most important towns (Marysville and Chico) in the upper Sacramento valley. The fifty-miles stretch is a dead level, every inch fenced and occupied, and as fertile as any spot on earth. Harvesters were in operation in all directions, principally in barley, although a few were cutting wheat. On inquiry, it was stated that the yield of both wheat and barley was disappointing, owing to excessive rains of the winter, the attack here and there of rust, and the later north winds, which shriveled some of the grain and beat out considerable more—which is practically a total loss. No one I met with would estimate the total yield at more than half a crop. The amount of hay is very large and of the best quality, but is such at the expense of wheat acreage, much having been cut for hay owing to its foul condition due to the extraordinary moisture.

During my stay at Chico I fell in with many old-time friends. Among the rest were Mr. and Mrs. G. H. Taylor, the good lady having grown to woman-

hood in sight of my home in Sutter county.

A man wholly worthy of her, Mr. G. H. Taylor, came and carried her away to grace his Chico home. Need I say her name was Eda Walton while a resident of Sutter county?

To the happy pair I am indebted for showers of kindness, which included a three-hours' drive over the streets and suburbs of the rose-embowered little city. We took in a drive through oak groves and extensive orchards on both borders of Big Chico Creek, going up and eastward on the south side and back on the north side to the magnificent residence of the owner, General Bidwell. There is yet a heavy flow of water in the creek and it is as clear as crystal, as it flows deep down in its channel over the pebbly bottom. What a contrast, thought I, between the natural streams and those befouled by the hydraulic miner! The latter, I thought, would have a very short run on "Big Chico" before the General, the city and the farmers would spike the hydraulic guns. Isn't it strange that such work was ever thought to be legitimate?

While in the city I visited the State Normal School; met with many friends of the long ago, such as Gen. and Mrs. Bidwell, Gen. Montgomery, F. C. Lusk, Charles Ball, J. W. Soper, and, of course, Prof. R. F. Pennell, formerly of Marysville, now principal of the Chico Normal, and his entire family, as well as the pupils, who had just finished a most successful term of school, and graduated 44 full-fledged teachers to teach the young idea how to shoot. The Prof. was deservedly proud of his work and of his corps of assistants. The commencement address was delivered by Hon. H. V. Morchouse, of San Jose, which announcement is sufficient to convince the world that it was able, rich and rare, and received the hearty commendation and applause of the immense throng. The writer can but acknowledge the very cordial treatment received while a guest at Chico, and, promising an early return, he reluctantly took his departure from the pleasant scenes.

### THE ORDER IN WEST VIRGINIA.

T. C. Atkinson, one of the associate editors of the *Farmers' Friend*, of Mechanicsburg, Ia., writes thus from his home in West Virginia:

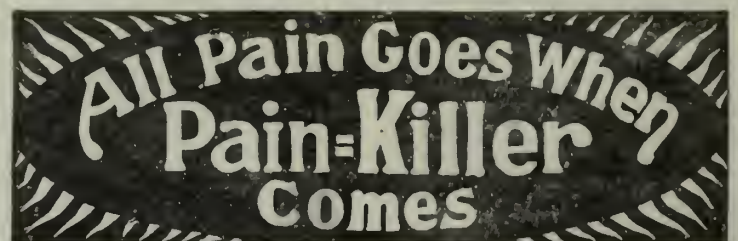
The Order of Patrons of Husbandry has been in continued operation in this State for more than twenty-one years, and it is the oldest and best farmers' organization in existence. All the sensationalism that surrounded it twenty years ago has been eliminated, until today it is the great conservative, effective friend of the farmers. During the present year a special effort will be made to revive as many of the dormant Granges as possible, and we would fraternally urge every old member of the order who may see this item to at once write the Master or

Secretary of the State Grange, and let him know if you still feel any interest in the Grange cause, and what you think of the possibility of reorganizing your old Grange or some other dormant Grange in your county. The Grange is by no means dead in this State, but a revival is much to be desired, and we hope to hear from every member who sees this item. The cost of the Grange is now insignificant compared to the vast amount of good it has done and will continue to do for the farmers' cause. We make war upon no other class or organization, but our faith is in the Grange, and we desire to enlist every farmer in the State in our cause. Don't put it off until to-morrow, but at once write to us what you think of the possibility of reviving the Grange in your county, and we will try to help you.

### Concerning the Summer Camp.

TO THE EDITOR:—The affairs of our Summer Camp are progressing steadily. We hear from all quarters of intending visitors, and have no doubt of a respectable attendance. It will not be more than that on account of short notice and hard times. It is possible, also, that the time selected is not the most suitable. That will be determined by experience. While we hear of intending visitors from all quarters, and know that of all the intentions more or less will materialize, we are worried because so few write and make actual engagements. This, we know, cannot be helped, because people do not know *certainly* that they can come. At the same time it is an embarrassment, because to properly prepare for people costs money, and the camp has no money and incurs no debt. Upon sufficient engagements individuals would make the necessary arrangements, expecting later to sell what they provide to the camp, but none of us are rich enough to take many chances.

What we can do, therefore, is this: We can have upon the ground all the tents that are *ordered*, and very few more. We cannot supply furnished tents this year, for we have no money to buy furniture, and we *incure no debt*. Those coming with their own tents and fittings are all right. Those who wish to rent tents must notify us and bring their own outfit. An oil stove and utensils cost very little; that, with the bedding, will do. They can sleep on the floor or knock together a bedstead of boards, or bring cots. We know where we can buy a lot of cots, blankets and pillows *very cheap*, but we have not the money to buy with. People may understand that the expense of camping here will be just the same as camping elsewhere if they take their own outfit. In time we shall have full outfits to rent. This year the rent of tents must be sub-



For Colic, Cramps, Cholera Morbus and all Summer Complaints, there is no cure equal to **Pain-Killer**. Get a bottle to-day. Keep it constantly on hand, for there is no kind of pain or ache—internal or external—that

# Pain-Killer

will not relieve. Accept no imitation or substitute. Genuine has PERRY DAVIS & SON on bottle. The quantity has been doubled, but the price is still 25c.



stantially what is charged by the tent manufacturers. We can make far cheaper arrangements when we get the money to make them with. It will be, in any case, far cheaper than boarding. There will be ample boarding accommodations for all at about \$8 per week for adults and less for children.

Only a small portion of the permanent camp can be got ready this year, for the reason that we do not dare to burn so much brush. We will do that in the fall. Meanwhile my own grounds adjoining will afford ample accommodations for man and beast, and if there is any charge made for their use it will go right into the camp fund.

The character of our plan is now getting to be understood. In substance it is a short university course at our school, ending with a great three days' rally at Santa Cruz instead of Capitola as first announced. The summer school will supply the solid work; the grand rally at the seaside will arouse the enthusiasm. Concerning this large meeting we shall have much to say later.

I note the proposal of Bro. Amos Adams that the State Grange appropriate money. We thank him, but think this enterprise better stand on its own financial legs. The State Grange is poor and we wish to help build it up, and not to be a drain upon it.

EDWARD F. ADAMS.

ELECTRICITY has been rated as a dutiable article by the Canadian Comptroller of Customs. The question arose in connection with importing it into Canada for power and lighting purposes from the plant of the Niagara Falls Hydraulic Power and Manufacturing Co. The Comptroller decides that it comes under the head of unenumerated articles and must pay 20% duty.

#### Cure for Cancers, Tumors, Glandular Enlargements, and All Ovarian Troubles.

MESSRS. EDITORS:—Referring to the many articles that have in times past appeared in your columns in reference to the curing of cancer in this city, allow us to say that the specialists engaged in this work are still meeting with even greater success than ever. With dispatches full of the new serum treatment for cancer, it seems strange that no one takes the trouble to investigate the discoveries of Dr. A. S. Cook and Mrs. Dr. Cook of 231 Post street, this city, who have made a study of cancers and tumors for the past thirty years. They are making some marvellous cures, and are probably among the best authorities on diseases of this class in the world. But a prophet is not without honor save in his own country, and they belong to San Francisco. The medical fraternity seem to think that the discoveries of specialists reflect upon their own intelligence, and it is only the noblest minds that are capable of seeing beyond the reflection of themselves.

Dr. Cook and Mrs. Dr. Cook use no knife, no burning, and their treatment is not painful nor unpleasant in its effects. If there is no abrasion of the skin they make none, and their patients are not disfigured for life because of their treatment. They use both local and constitutional treatment, and their remedies are purely vegetable. They say cancer virus cannot be cut nor burned out of the blood. Their aim is to eradicate the poison from the blood and now have no trouble in doing so.

They positively assert that they can cure any case of cancer if taken in time. This can be proven by any number of persons all over the United States and the Sandwich Islands who have been cured by them. Cancer is a terrible affliction, and it is a pity that thirty years of patient research should not be given that recognition it deserves. They are still allowed to refer, as heretofore, for the correctness of the above to Mr. W. B. Ewer, of 220 Market street.

#### DIVIDEND NOTICE. SAN FRANCISCO SAVINGS UNION, 532 California St., Cor. Webb.

For the half year ending with the 30th of June, 1895, a dividend has been declared at the rate per annum of four and eight-tenths (4 8-10) per cent on Term Deposits, and four (4) per cent on Ordinary Deposits, free of taxes, payable on and after MONDAY, the 1st of July, 1895.

LOVELL WHITE, Cashier.

#### DIVIDEND NOTICE.

#### The German Savings and Loan Society, 526 California St.

For the half year ending June 30, 1895, a dividend has been declared at the rate of four and eight-tenths (4 8-10) per cent per annum on Term Deposits, and four (4) per cent per annum on Ordinary Deposits, free of taxes, payable on and after MONDAY, July 1, 1895.

GEO. TOURNY, Secretary.

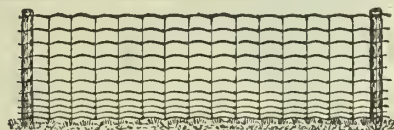
Watts: "Just look at that fellow on the bicycle, will you? What in the world is the use of him humping over so?" Potts: "He must be trying to put his shoulder to the wheel."—Parish Visitor.

#### \$100 Reward, \$100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers that they offer One Hundred Dollars for any case that it fails to cure. Send for list of Testimonials.

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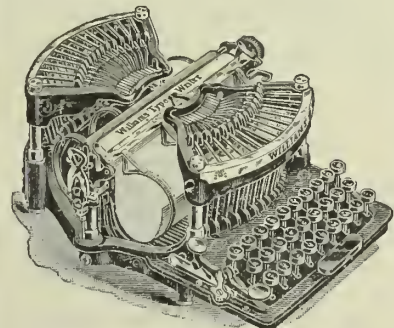
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## Acclimatizing Plants.

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1 Ficus glomerata (cluster fig).  
1 Melicocca bijuga (Genip).  
1 Persea gratissima (Ahuacate).  
1 Prosopis dulcis (Algarrobo).  
1 Psidium lucidum (yellow strawberry guava).

#### Coll. B.

##### Twelve Economic Plants.

1 Agave rigida Sisalana (Sisal hemp).  
1 Aleurites Moluccana (Candle-nut tree).  
1 Annonum cardamomum (Cardamom).  
1 Bambusa arundinacea (giant bamboo of India).  
1 Capsicum frutescens (Tabasco sauce pepper).  
1 Chorisia speciosa (floss silk tree).  
1 Croton tiglium (Croton oil tree).  
1 Cinnamomum camphora (Camphor tree).  
1 Crescentia cucurbitina (Cala-bash tree).  
1 Santalum album (Sandalwood).  
1 Sapindus mukorosi (Soap berry tree).  
1 Thea viridis (Tea).

#### Coll. C.

##### Twelve Palms.

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1 Cocos australis.  
1 Erythea edulis.  
1 Kentia Belmoreana.  
1 Kentia Forsteriana.  
1 Livistona australis.  
1 Phoenix canariensis.  
1 Phoenix farinifera.  
1 Sabal Palmetto.  
1 Sabal Mexicana.  
1 Serenoa serrulata.  
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##### Twelve Decorative Plants.

1 Agave horrida.  
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1 Agave potatorum.  
1 Aloe Hamburyana.  
1 Aralia papyrifera.  
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1 Dasylirion serratifolium.  
1 Doryanthes Palmeri.  
1 Dracaena draco.  
1 Fourcroya Bedinghausii.  
1 Fourcroya longeva.  
1 Yucca baccata.

#### Coll. E.

##### Twelve Timber and Shade Trees.

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1 Bilenia speciosa.  
1 Cupressus Guadalupeensis.  
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1 Ficus religiosa.  
1 Ficus infectoria.  
1 Fraxinus pistaciifolia.  
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1 Pinus pinea.  
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#### Coll. F.

##### Twelve Flowering Shrubs.

1 Acacia Farnesiana.  
1 Acacia armata.  
1 Adenocarpus frankenoides.  
1 Anthyllis barba Jovis.  
1 Coronilla viminalis.  
1 Cytisus Atleanus.  
1 Cytisus Everastianus compactus.  
1 Erythrina caffra.  
1 Howea longifolia.  
1 Medicago arborea.  
1 Parkinsonia aculeata.  
1 Tecoma Smithii.

#### Coll. G.

##### Twelve Climbers.

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1 Antigonon leptopus.  
1 Campsidium Valdivianum.  
1 Clematis montana grandiflora.  
1 Dioclea glycinoides.  
1 Lycium Richii.  
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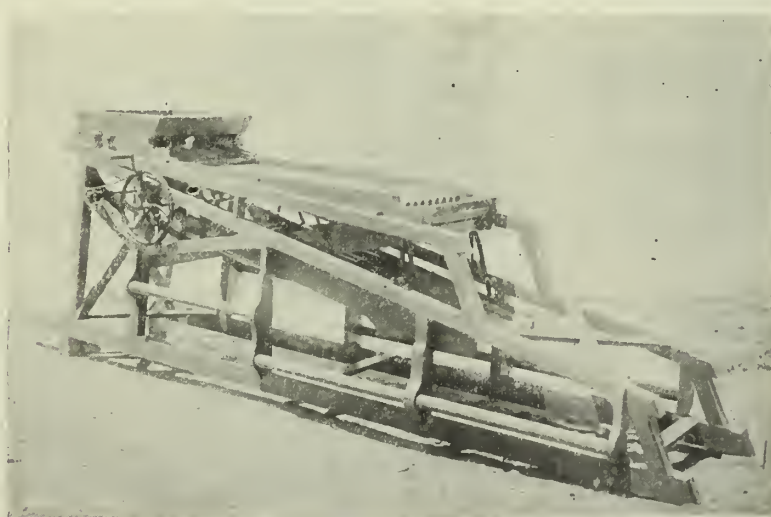
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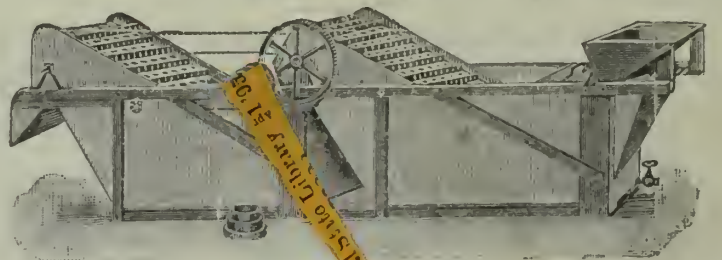
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